The New Deal and Executive Control of the Distribution of Federal Funds Across States

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There has been extensive discussion in the study of administrative law about the transition from direct Congressional control of regulation of economic activity and spending to more control of such activity through the executive and administrative bodies (DeMuth Sr. 2013, Epstein 2013; Price 2015). The transition is often seen as a move from "bright line rules" in legislation to less specificity in the enabling legislation and the ceding of more rule making and spending authority to the executive and administrative agencies. For example, Congress ceded some regulatory control when it created such agencies as the Bureau of Animal Industry in 1884, the Interstate Commerce Commission in 1887, and the Food and Drug Administration in 1907.

One of the key areas where the Constitution gives Congress control of federal government economic activity is in the "power of the purse." In this paper we examine changes in Congressional legislation that controlled the distribution of federal funds across the states during the 1920s and 1930s and the impact of those changes on the factors that influenced the distribution. In the 1920s the lion's share of federal spending distributed across states was for highways, rivers and harbors, veterans, and defense. Congress maintained relatively tight control over the distribution of spending across states. The highway program established a specific formula for the maximum federal spending in each state and required matching state expenditures. Congress directly approved all river and harbor projects of the Chief Engineer of the Army. Rules were established for the relatively small amounts of up to $1 to $2 million distributed for the Shepard-Towner child health program, agricultural experiment stations, agricultural extensions, and agricultural and mechanical colleges.

As the economy sank into the Great Contraction, President Hoover and the Republican-dominated Congress between 1929 and 1932 ramped up annual real outlays of federal spending by 88 percent, largely through existing government programs. In January 1932, they created the Reconstruction Finance Corporation (RFC) to provide *emergency* financing and gave it authority to make loans to aid in financing agriculture, commerce, and industry. They expanded the lending authority to include making loans for relief to state and local governments in July of that year. The claims of emergency appear to be strongly correlated with the loosening of Congressional control over the distribution of funds. [1]

The economy's continued decline contributed to a landslide presidential election victory for Franklin Roosevelt and large majorities of Democrats in both houses of Congress. In the first hundred days of the Roosevelt administration, the federal government consistently used the emergency language to establish the "New Deal," a large-scale experiment in which dozens of new programs and agencies were established in an attempt to resolve a wide range of specific problems in the economy. The vast majority of federal distribution of funds under the New Deal came under three categories: relief, public works, and the farm programs. Over the next six years real annual outlays across states were raised by another 77 percent.

In comparison with the situation before the New Deal, we focus on the level of discretion that Congress granted to the executive branch in determining how to distribute the funds across geographic areas. In particular, we look at the enabling legislation for the largest grant programs: the highway programs, the River and Harbor projects run by the Chief of Engineers of the U.S. Army, the relief features of the Reconstruction Finance Corporation, the Federal Emergency Relief Administration (FERA), the Works Progress Administration (WPA), the Civil Works Administration (CWA), the Public Works Administration (PWA), and the public

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[1] In a more general discussion Robert Higgs (1987) finds that emergencies allowed political leaders to expand their authority during the emergency and changed the general public's attitudes toward the role of government that led to a long run ratcheting upward into the scope of the federal government's authority.

assistance features of the Social Security Act. We then examine the actual distribution of federal funds across states and the factors that were correlated with that distribution before and during the New Deal.

During the first hundred days Congress declared emergencies in many areas and gave the President extensive discretion over the allocation of funds across states. This was particularly the cases for monies spent on conservation work by young adults in Emergency Conservation Work (later the Civilian Conservation Corp (CCC)), the Federal Emergency Relief Administration (FERA), and the Civil Works Administration (CWA). The FERA and CWA were strongly intertwined and distributed 45 percent of the federal money that went to the states in fiscal years 1934 and 1935. By 1935 FERA and CWA administrator Harry Hopkins had become dissatisfied with the extent of control that he had over the distribution of funds within the states by the FERA. As a result, Roosevelt and Congress negotiated over the future distribution of relief funds. The outcome was a compromise in which the Roosevelt administration gained greater control of the emergency relief funds distributed by the WPA but Congress established tighter rules over the distribution of the public assistance funds (Aid to Dependent Children (ADC), Old-Age Assistance (OAA), and Aid to the Blind (AB)) under the Social Security Act of 1935 (Wallis, Fishback, and Kantor 2006).

When Congress relaxed control over the allocation funds during the early New Deal, it increased the potential for use of the funds in ways that would enhance the re-election chances of the President and incumbents in Congress. A large literature has developed on the reasons for the large variation in the per capita distribution of New Deal funds across states and counties.[2]

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[2] Arrington (1970) and Reading (1973) first identified the large variation in distributions. Wright (1974) developed a median voter model and found that swing voting had a very strong impact. Wallis (1987, 1991, 1998, 2001) emphasized the role of the states in determining the distribution because state governments often had to make

Don Reading (1973) ran a cross-sectional regression showed some basic relationships between federal spending and various correlates. Gavin Wright (1974) then developed a median voter model and tested it with cross-sectional data and found that presidential politicking played a significant role in determining the distribution of funds. In particular, he found that more funds went to states that were more likely to be swing voting states. Most of the studies that have followed have found that swing voting was a significant factor. After John Wallis (1987, 1998) performed a careful analysis of the various strains of the literature, Robert Fleck (2008) used estimates for state cross-sections to argue that the New Deal came about as a major policy change because the Depression led the electorate to value increased spending on relief, roads, conservation, and reclamation. Spending on these programs could easily be designed to allocate more per capita to states where the Depression was more severe and there was more federal land. These states demanded more funds and were successful because they had more political clout because they were swing voting states and had more electoral votes per capita.

The literature on the federal distribution across states has one large gap. We cannot know if the New Deal led to a major policy change in cross-state distribution without information on how the federal government distributed the money across states before the New Deal. We fill that gap here in two ways. First, we examine the Congress's enabling legislation for spending on major programs before and during the New Deal to show which programs gave the President more discretion. Second, we collect annual information on federal spending from fiscal years

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proposals to get the funds. Anderson and Tollison (1991) emphasized the role of Congress. Fleck (1999a, 1999c, 2001a, 2001b, 2008, and 2013) developed new models that showed the impact of voter turnout, emphasized the importance of federal lands, and discussed more complex interactions between political variables. He was the first to use the political variables as instruments. Couch and Shughart (1998) wrote a book-length survey with additional material. Stromberg (2004) emphasized the importance of the radio to electioneering. Fishback, Kantor, and Wallis (2003), Kantor, Fishback, and Wallis (2013), and Wallis, Fishback, and Kantor (2006) examined the distribution across counties, showed that the factors influencing the distribution varied substantially by program, and described the extent to which the Roosevelt administration sought to control corruption by local governments.

1924 through 1940 and compare and contrast the factors that influenced spending before and during the both periods. The statutory analysis shows that Congress consistently described the New Deal legislation as *emergency* legislation designed to combat the Great Contraction. The use of the term calls to mind the necessity for speedy action and Congress gave increased authority to the executive branch in the distribution of funds across the country. How did the determinants of the geographical distribution of funds change as a result? Comparisons of the distribution of federal funds before and during the New Deal emergency show that many of the factors that influenced the spending across states were the same in both periods with one key exception. After controlling for federal lands and other factors commonly discussed, swing voting in presidential elections played a far more prominent role under the New Deal than prior to the New Deal. Most of this positive relationship with swing voting occurred in the context of the relief programs where the President had a great deal of discretion. However, the analysis also shows that swing voting was not important in other programs where the President had a great deal of discretion. Further, the distribution of federal matching grants for public assistance also showed a strong relationship with swing voting even though the states were the primary decision makers influencing the distribution.

I. Distribution Rules For Spending Programs Existing Prior to the New Deal

There were a number of federal spending programs in place before the New Deal that distributed roughly $1.6 billion dollars in expenditures per year across the states. Around $1.1 billion (73 percent) was distributed by the Veterans Bureau to individuals and for programs for veterans; $162 million (10.4%) was distributed for highways; $144 million (9.3%) was distributed for public works related to rivers and harbors built and maintained by the Chief Engineer of the Army, $56.6 million for the National Guard, and $15 million for Bureau of

Reclamation loans. The highway program was the only one in which there was a significant change in the rules for distribution across states during the New Deal. The total amounts spent on highways and rivers and harbors also were influenced because these types of projects also received additional supplemental funds from the new relief and public works programs created under the New Deal.

I.1 Veterans' Spending

Prior to the New Deal veterans received the largest share of expenditures across states listed by the Treasury Department. It does not appear that the New Deal had any effect on how veterans' funds were distributed across states. The budgets for the Bureau of Pensions, founded in 1832, and the National Home for Disabled Volunteer Soldiers, founded in 1865, were approved and appropriated for by an Act of Congress every year. These were not blanket allocations to an agency to be distributed at the discretion of the agency. Instead, the appropriations acts specified precisely how moneys were to be spent. Any and every increase or decrease in pensions and payments to widows had to be approved by a separate Act of Congress. Similarly, each new construction project for the Veterans' homes had to be individually approved by Congress.

During World War I the War Risk Insurance Act Amendments of 1917 established the Bureau of War Risk Insurance to provide rehabilitation and vocational training for disabled veterans. The Vocational Rehabilitation Act of 1918 authorized the Federal Board for Vocation Education for the vocational training. In 1919 the Public Health Service was charged with responsibility for medical care for veterans. On August 9, 1921 Congress created the Veterans' Bureau to take over these functions (Department of Veterans' Affairs, undated) and to expand capacities in these areas to meet the needs of World War I veterans.

In July 1930 the Veterans' Bureau, Bureau of Pensions, and the National Home for Disabled Volunteer soldiers were consolidated into the newly created Veterans' Administration.[3] Throughout these changes when administrative control was consolidated, all appropriations and each project had to be approved by Congress. If the agency required funds in excess of the allotted amount, the additional appropriations had to go through Congress. After being approved by Congress, the Director of the Bureau of the Budget submitted the proposal with all supporting facts to the President for a signature. Appropriated amounts ranged from small sums like $240 for a repeat amputation for a WWI veteran to the appropriations for over a billion dollars for the Veterans' Bonus. The distribution of the famous "Veterans' Bonus" of 1936 went to individuals and was determined by the parameters set for the adjusted service certificates under the World War Adjusted Compensation Act of May 19, 1924 (43 Stat. 121).

I.2 Highways

Prior to the New Deal the distribution of federal highway funds across states was based on matching grants with maximum amounts set by a formula. New Deal legislation slightly altered the matching formula and weakened the state matching rules. Federal highway spending originated with the Federal Aid Road Act of 1916, which authorized $75 million over 5 years for the Secretary of Agriculture to cooperate with state highway departments to construct and improve rural post and star roads. The funds were to be distributed across states based on a formula with three equally weighted criteria based on the state's shares of population, land area, and mileage of rural delivery and star routes.[4] The states were required to fund half the cost of

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[3]An Act to authorize the President to consolidate and coordinate governmental activities affecting war veterans," 46 Stat. 1016 (1930).

[4] Star routes were routes in which the post was delivered by contractors. They became known as star routes because they were given asterisks in listings of delivery routes. See https://about.usps.com/publications/pub100/pub100_017.htm , downloaded on May 26, 2016.

their proposed projects, which required approval by the Secretary of Agriculture before federal funds were provided.[5]

The Federal Highway Act of 1921 amended the Federal Aid Road Act to transfer powers and resources given to the Council of National Defense and the Secretary of War in relation to highways and highway transport to the Secretary of Agriculture. The funds were to be spent in each state on a system of highways selected by the state that could not exceed 7 percent of the total highway mileage in the state.[6] The new Act kept a similar match requirement to the one in the 1916 Act, but allowed some adjustments for unappropriated public lands. It also kept the cross state distribution rules based one-third on relative population, one-third on postal and star roads, and one-third based on land area, while adding an additional clause that no state should receive less than 0.5 percent of each year's allotment of federal dollars. Funds were also provided for national forest roads and trails, half to be spent in national forests with the rest to be

[5]The Federal Aid Road Act of 1916 (also known as the Bankhead-Shackleford Act), 39 Stat. 355, was enacted on July 11, 1916. The Act not only allocated money but also regulated how states could spend it. The states were limited to a $10,000 per mile cap on federal dollars. Non-construction items were limited to 10% of the cost of the roads and none of the federal funds could be used for anything other than construction. Cost overruns and excessive administrative costs were the sole burden of the states, as were future maintenance costs for the roads. The funds were also prohibited from being used areas with more populations greater than 2,500. The Act stated that the federal government would wait until the state had completed its construction before paying out the funds, but it also allowed for payments to be made as the work was completed based on its pro rata share. Additional limits included a limit of 3 percent of the funds for use for administration. The 1921 Federal-aid Highway Act slightly changed the allocation formula and raised the per mile cap to $15,000.

[6] Of the road mileage to receive federal funds a maximum of 3/7 would be for primary or interstate highways and the rest were connecting secondary or intercounty highways. A maximum of 60 percent of the federal funds within the state were to be spent on the primary or interstate highways "until provision has been made for the improvement of the entire system of such highways," but the Secretary of Agriculture and state highway department could agree to more. "Whenever provision has been made by any State for the completion and maintenance of a system of primary or interstate and secondary or intercounty highways equal to 7 percentum of the total mileage of such State, as required by the is Act, said State, through the State highway department, by and with the approval of the Secretary of Agriculture is hereby authorized to add to the mileage of primary or interstate and secondary or intercounty systems as funds become available for the construction and maintenance of such additional mileage. Before projects could be approved by the Secretary of Agriculture the state had to make provisions for state funds required each year of "such States by this Act for construction, reconstruction, and maintenance of all Federal-aid highways within the state, which funds shall be under the direct control of the State highway department (214)."

used for “forest roads of primary importance to the State, counties, or communities within, adjoining, or adjacent to the national forests.”

Citing an emergency the first New Deal Congress enacted section 204 of the National Industrial Recovery Act of June 16, 1933, which shifted the rules for federal highway funds while appropriating an additional $400 million. Section 204(a) part (1) allowed for “emergency construction on the Federal aid highway system” while part (2) allowed “for expenditure in emergency construction on secondary or feeder roads to be agreed upon by the State highway departments and the Secretary of Agriculture.” Section 204 (d) removed the limits on expenditures per mile and eliminated the ban on funds used for urban areas with more than 2,500 people. The allocations of the funds in part 204(a) were to be based 7/8ths on the rules from the 1921 Act and 1/8th on the population from the 1930 census. The key change was that the states were no longer required to fully match funds under the NIRA. This change was offset some by an amendment to the act in 1934 that states to use the revenues that existing state law had designated for highways.[7] If the state failed to provide such funds, the federal government could reduce its spending by at most one-third of the amount the state to which the state would be entitled (section 12).

I.3 Rivers and Harbors

[7] The precise language stated “no part of the funds apportioned to any State need be matched by the State, and such funds may also be used in lieu of State funds to match unobligated balances of previous apportionments of regular Federal-aid appropriations (Sec. 204b).” The Amendments of 1934 replaced the matching grants with a requirement that the states must “use at least the amounts now provided by law for such purposes in each state from state motor vehicle registration fees, licenses, gasoline taxes, and other special taxes on motor vehicle owners and operators of all kinds for the construction, improvement, and maintenance of highways and administrative expenses in connection therewith, including the retirement of bonds for the payment of which such revenues have been pledged, and for no other purposes, under such regulations as the Secretary of Agriculture shall promulgate from time to time (Sec. 12).”

Funds for individual River and Harbor projects run by the Secretary of War and the Army Corps of Engineers had to be approved by Congress, under the Rivers and Harbors Act of 1899.[8] Once the plan was approved by all parties, it was binding and could not be changed without separately approved modifications. The Board of Engineers for Rivers and Harbors was created in 1902 inside the Office of the Chief of Engineers to determine the viability of projects, including benefits, costs, and location. After every major flood season during the 1920s Congress enacted special appropriations to repair levees, channels and other flood-control. They loosened direct control somewhat after the major Mississippi River Flood of 1927. On May 15, 1928 they made a major "appropriation for emergency fund" of $5 million to be used by the Secretary of the Army on the recommendation of the Chief of Engineers to maintain flood-control projects on the river. The Chief was given leeway to unilaterally shift these funds to different areas to deal with the flood emergency.

In response to the emergency of the Great Contraction, Section 202 of the National Industrial Recovery Act of 1933 seems to have weakened congressional control somewhat. The language stated "that no river or harbor improvements shall be carried out unless they shall have heretofore or hereafter been adopted by the Congress *or* are recommended by the Chief of Engineers of the United States Army." Thus, it appears that the Chief of Engineers could recommend projects to be funded without direct approval of Congress.

I.4. Bureau of Reclamation

[8]The law stated: "It shall not be lawful to construct or commence the construction of any bridge, causeway, dam, or dike over or in any port, roadstead, haven, harbor, canal, navigable river, or other navigable water of the United States until the consent of Congress and until the plans for the same shall have been submitted to and approved by the Chief of Engineers and the Secretary of War." Projects for waterways located entirely within the borders of one state could be built under the authority of a state legislature as long as the plans for construction had been approved by the Secretary of Transportation, the Chief of Engineers, and the Secretary of the Army. In a 1913 Act on Preliminary Examinations and Reports (c. 144, § 3, 37 Stat. 825 (1913), codified as 33 U.S.C.A. § 545), if the Board found a project to be unnecessary, it could not go forward without a directive from Congress.

The Reclamation Act of 1902 created the Bureau of Reclamation with a goal to improve arid and semi- arid lands in the West by constructing irrigation projects that stored and diverted water in the number of states and territories. The projects were funded by interest-free loans from the Reclamation Fund, which Congress set up in the Treasury and held "all the moneys [except for 5 per cent] received from the sale and disposal of public lands in all states west of the 96th parallel (except Texas).[9] The Secretary of Interior, and after 1926 the Commissoner of Reclamation, had the authority to determine to evaluate projects, which were then chosen with Congressional approval.[10] Hoover Dam (once Boulder Dam) had its own statute (43 USCA617a), which created the "Colorado River Dam Fund" under the control of the Secretary of Interior to be used only for that project. The $25 million specifically allocated for flood control by the Secretary of Treasury was to be repaid to the United States Treasury. The project also involved cooperation with seven states and the funding for the project was authorized by Congress in parts.

II. New Emergency Programs During the Great Depression

While real GDP sunk 30 percent between 1929 and 1932 the Hoover administration and Republican Congress expanded real federal outlays by 88 percent within the context of the

[9]This area includes the states of Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming."

[10]"Under the supervision and direction of the Secretary of the Interior, the reclamation of arid lands, under the Act of June 17, 1902, and Acts amendatory thereof and supplementary thereto, shall be administered by a Commissioner of Reclamation who shall be appointed by the President by and with the advice and consent of the Senate." 43 U.S.C.A. 373a (1926). Section 6 provided that the Secretary of Interior was authorized to use the reclamation fundfor costs of operation and maintenance of all reservoirs and irrigation worked constructed under the Reclamation Act. The right to purchase and to condemn lands required for the projects was given to the Secretary of Interior by Section 7. Additional privileges of the Secretary included the right to make rules and regulations necessary for carrying out the Act and are mentioned in Section 10. In sum, the authority of the Secretary of Interior (the executive branch representative in this case) was tightly defined in the statutes, without much space for interpretation. Even though he was authorized to survey lands and propose projects, leaving the locations of the projects somewhat to his discretion, the final say was with Congress, which either approved or denied each and every project.

existing programs. As the economy continued to struggle, in February 1932 they declared an emergency and created the Reconstruction Finance Corporation to distribute loans to troubled banks and industrial firms. In July 1932 the federal government for the first time made loans to states and cities for relief of the poor and unemployed. After a landslide elections Roosevelt and a Democratic Congress shifted gears and began distributing large amounts of grants throughout the country through three new emergency programs, the Federal Emergency Relief Administration (FERA) to combat poverty and build local public works, the Public Works Administration (PWA) to build federal and local public works, and the Agricultural Adjustment Administration (AAA) to raise farm prices by paying farmers to take land out of production. Over the rest of the decade Roosevelt and Congress made several changes to the structures of the agencies but the vast majority of spending went to the three categories of spending.

II.1. Relief

The New Deal's largest change to federal spending was the introduction of the distribution of funds for relief for civilians, which accounted for roughly half of the funds distributed across states in the 1930s.[11] The Hoover Administration and Republican Congress started the move toward providing relief by providing *loans* to be repaid from the future federal allocation of state highway funds. The distribution of loans was limited by a maximum percentage for any state and by language that required the state and local governments and local charities had exhausted their resources. That language was reinforced by the rules established

[11] The Shepard-Towner Act of 1921 did not provide relief but was an example of a pre-New Deal program that distributed funds to be used by states. In this case it was an act for the "promotion of the welfare and hygiene of maternity and infancy, and for other purposes. The Act called for tight control of the distribution. The initial appropriation for fiscal year 1921 was the distribution of $480,000 equally across the states. After fiscal year 1921, $1 million dollars was available and was to be "apportioned $5,000 to each State and the balance among the States in the proportion to which their popultiona bears to the total population of the States of the United States, according to the last preceding United States Census." Further, "no payment out of the additional appropriation herein authorized shall be made in any year to any State until and equal sum has been appropriated for that year by the legislature of such State for the maintenance of the services and facilities provided for in this Act."

for applications for the loans. In 1933 the Federal Emergency Relief Act provided for *nonrepayable grants* to states with restrictions on the distribution of the initial federal funds through October 1 of 1933, when the statute eliminated the restrictions. The states then made decisions on how to distribute the moneys within the state. FERA administrators emphasized that they wanted the states to share the burden of the poverty relief, but the actual shares paid by the states varied widely. The President's Executive Order establishing the Civil Works Administration in November 1933 imposed no limits on the distribution. In 1935 Roosevelt negotiated an agreement with the two houses of Congress that continued to give the executive branch control the distribution across states of *emergency* relief for employables while establishing a set of matching rules for the distribution of federal funds for state public assistance programs to aid widows, the elderly, and the blind.

II.1.1 Relief under the RFC

The only distribution for civilian poverty relief that was made under the Hoover administration and Republican Congress came from a $300 million *loan* fund that was enacted on July 21, 1932 in the Emergency Relief and Construction Act of 1932. It authorized the Reconstruction Finance Corporation (RFC) to make the funds available to the "several States and Territories, to be used in furnishing relief and work relief to needy and distressed people and in relieving the hardship resulting from unemployment, but not more than 15 percentum of such sum shall be available to any one State or Territory (p. 709). The loans carried a 3 percent interest rate and the loans were to be repaid through annual deductions from future federal authorizations for construction of highways and postal roads.[12] Governors could apply for funds

[12] "by making annual deductions, beginning with the fiscal year 1935, from regular apportionments made from future Federal authorizations in aid of the States and Territories for the construction of highways and postal roads, of an amount equal to one-fifth of the share which such State or Territory would be entitled to receive under such

from time to time and "certify the necessity for such funds and that the resources of the state, "including moneys then available and which can be made available by the Stator Territory, its political subdivisions, and private contributions, are inadequate to meet its relief needs." (710). The governor then directed the administration and was responsible for the funds. Upon the governor's request, the RFC could make the loan directly to a municipality or political subdivision within the states (711).[13]

The RFC issued Emergency Relief Bulletin No. I on August 2, 1932 to outline the bases for distribution. After quoting the text of the Act about necessity of funds due to inadequacy, it states: "It is plainly the intent of the act that any funds made available under this Act shall be, not in lieu of, but merely supplemental to local and state funds and private contributions where funds from those sources are inadequate." The information requested included estimates of the total amount needed; estimates of "the amounts available or which can be made available" from state and local governments, private charities; descriptions of expenditures and people helped monthly over the prior year by various groups; and the amounts spent and numbers helped during the calendar year of 1931; and statements of any "emergency action to provide relief funds taken after January 1, 1932" and "any…emergency action contemplated or which can be taken before December 31, 1932" by states and municipalities. (from copy printed in Williams

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apportionment, except for the provisions of this section, or of an amount equal to one-fifth of the amounts so paid to the governor of such State or Territory pursuant to this section and all accrued interest thereon to the date of such deduction, which is the lesser, until the sum of such deductions equals the total amounts paid under this section and all accrued interest thereon." (p. 710).

[13] Title II of the Emergency Relief and Construction Act of 1932 allowed the RFC to "make loans to, or contracts with" states and a variety of local government entities to "aid in financing projects authorized under Federal, States, or municipal law which are self-liquidating in characters, such loans or contracts to be made through the purchase of their securities, or otherwise." The loans could go to corporations formed to provide low income housing or slum reconstruction, to private corporations to aid in carrying out construction or improvements to bridges, tunnels, docks, viaducts, waterworks, canals, and markets.

(1939, 53-55). In 1934 Roosevelt and the New Deal Congress effectively turned the loans into grants by relieving the states of the requirement to repay the loans.[14]

II.1.2 Emergency Conservation Work Act.

The first relief bill passed under the New Deal involved relatively few funds but gave the executive *carte blanche* in how to distribute them. Soon after Roosevelt was inaugurated, he called for the creation of what became the Civilian Conservation Corps, which provided for unemployed youths to become engaged in conservation work. The originating Act "for the relief of unemployment through the performance of useful public works, and other purpose" was passed on March 31 as Public Resolution No. 3 (73d Congress, session I) and became known as the Emergency Conservation Work Act. The Act gave the President authority, "*under such rules and regulations as he may prescribe and by utilizing such existing departments or agencies as he may designate*," to employ U.S. citizens on government natural resources projects that *"the President may determine to be desirable*."[15] The only limit on how the executive could distribute the funds was the amount appropriated, which was limited to the unexpended amounts

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[14] Section 14 of Public Act No. 393 (73d Congress, session II), the highway amendments and appropriations from June 18, 1934, stated that "No deductions shall hereafter be made on account of prior advances and/or loans to the States for the construction of roads under the requirements of the Federal Highway Act or on account of amounts paid under the provisions of title I of the Emergency Relief and Construction Act of 1932 for furnishing relief and work relief to needy and distressed people." Williams (1939, 48, n.63) suggests that the states believed that this clause freed them from repaying the relief loans to the RFC, although some might say that they still owed the funds. As of 1939 the debts for counties and cities had not been cancelled. He quotes Senator Wagner to the effect that members of Congress never expected the $300 million to be repaid (Williams 1939, 48).

[15] The Act gave the President authority, "*under such rules and regulations as he may prescribe and by utilizing such existing departments or agencies as he may designate*, to provide for employing citizens of the United States who are unemployed, in the construction, maintenance and carrying of works of a public nature in connection with the forestation of lands belong to the United States or to the several States which are suitable for timber production, the prevention of forest fires, floods and soil erosion, plant pest and disease control, the construction, maintenance or repair of paths, trails and fire-lanes in the national parks and national forests, and such other work on the public domain, national and State , and Government reservations, incidental to or necessary in connection with any projects of the character enumerated, *as the President may determine to be desirable*." The President could "in his discretion extend the provisions of this Act to lands owned by counties and municipalities and lands in private ownership," for activities related to preventing, forest fires, attacks of tree diseases and the control of floods.

of $300 million distributed by the RFC (there were none) and other unobligated public works funds at the time.[16]

II.1.3 The Federal Emergency Relief Administration

The Federal Emergency Relief Act of 1933, passed on May 12, continued the switch away from loans to providing non-repayable grants to the states. Where the money was spent within the state was decided by the state government. The Act imposed tight limits on the distribution of half of the funds across states until October 1, 1933, but these were violated by September and after October Congress did not impose restrictions on the executive branch's cross-state distributions. In section 1 of the Act Congress declared "that depression has created a serious emergency, due to widespread unemployment and increasing inadequacy of State and local relief funds, resulting in the existing or threatened deprivation of a considerable number of families and individuals of the necessities of life, and making it imperative that the Federal Government cooperate more effectively with the several States and Territories and the District of Columbia in furnishing relief to their needy and distressed people." The act released an additional $500 million in funds from the RFC beyond the original $300 million in relief loans.

A Federal Emergency Relief Administration (FERA) and Administrator were created to distribute the funds.[17] The states receiving the grants set up their own administration and made the decisions about distribution of grants within the states. However, the Federal Administrator, Harry Hopkins filled the role, could "assume control of the administration in any State or States

[16] Roosevelt's Executive Order 6101 on April 5, 1933 officially established the early version of the Civilian Conservation Corps.
[17] The Administrator could appoint and pay experts and officers and employees without regard to the civil service laws with a salary cap of $8,000.

where, in his judgment, more effective and efficient cooperation between the State and Federal authorities may thereby be secured in carrying out the purposes of this Act (section 3b)."

Under section 4b) half of the $500 million was to be distributed to the states on the basis of their spending and spending by their subdivisions *from all public sources*. They were "entitled" to one federal dollar for every three dollars spent in the prior quarter.[18] Section 4c) allowed the other half to be distributed to states when the state and local resources fell short of the "estimated needs" of the state.[19] After October 1, however, the one-for-three restriction on the first $250 million ended (section 4d), and the only limit on what each state received was that no state receive more than 15 percent of the total amount spent (Section 4f).

Both President Roosevelt and Harry Hopkins emphasized that the states and local governments were expected to pay their "fair share" at a June 14, 1933 conference in Washington, D.C. of governors and state relief administrators. In his first monthly report Harry Hopkins stated: "It was, nevertheless, clearly the intent of Congress that the Federal Government should not provide all of the funds required to meet the enormous relief needs of the Nation. The Federal Emergency Relief Administrator has, therefore, assumed that, wherever possible, the States and their local subdivisions should pay their fair shares. A specific statement on this point has been made to all of the governors and State emergency relief administrators. At

[18] "Each State shall be entitled to receive grants equal to one third of the amount expended by such State, including the civil subdivisions thereof, out of public moneys from all sources for the purposes set forth in subsection (a) of this section; and such grants shall be made quarterly, beginning with the second quarter in the calendar year 1933, and shall be made during any quarter upon the basis of such expenditures certified by the States to have been made during the preceding quarter (sec 4b)."

[19] "The balance of the amounts made available by this Act, except the amount required for administrative expenditures under section 3, shall be used for grants to be made whenever, from an application presented by a State, the Administrator finds that the combined moneys which can be made available within the State from all sources, supplemented by any moneys, available under subsection (b) of this section, will fall below the estimated needs within the State for the purposes specified in subsection (a) of this section: Provided, That the Administrator may certify out of the funds made available by this subsection additional grants to States applying therefor to aid needy persons who have no legal settlement in any one State or community, and to aid in assisting cooperative and self-help associations for the barter of goods and services (section 2c)."

the present time there is every assurance that a majority of the States will provide a much larger share of the relief funds required than they have in the past.[20]

The statistics for the distributions across states in the first report show that the FERA largely stuck to the 3-for-1 rule between May 22 and June 30 in distributing the three-for-one grants in section 4b). The key to following the rule was "expenditures" from "all public sources." Each state's "three" dollars in expenditures included federal funds provided by RFC loans. Thus 30 states that had borrowed RFC money to finance more than 75 percent of their relief expenditures in the first quarter had a major advantage in obtaining FERA funds relative to the 10 that had used no federal money, the 5 that had financed between 33 and 42 percent of the relief with federal funds, and the remainder using federal funds for between 57 and 72 percent of their relief spending.[21]

During the third quarter of 1933 the FERA was routinely violating the three to one rule in distributing the subsection B grants. The rule stated that the distribution "shall be made during any quarter upon the basis of such expenditures certified by the States to have been made during the preceding quarter (sec 4b)." When the total spent on relief by the states from funds provided by the state, local, and federal governments in the second quarter is divided by three and then compared with FERA distributions to the states in the third quarter, between 33 and 36 states received more subsection B FERA grants in the third quarter than would have been allowed

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[20]See pp. 1 and 2 of the First Monthly Report of the Federal Emergency and Relief Administration. These are pages 5 and 6 in Federal Emergency Relief and Civil Works Program. Hearing Before the Subcommittee of House Committee on Appropriations. 73d Congress, Session II. H.R. 7527. January 30, 1934.

[21] On July 1, 1933 the FERA issued Rules and Regulations on its procedures. In its initial operations the FERA had worked with both public and private entities because both had been active in providing relief for decades. The regulations required that after August 1, 1933 all continued activity could only be done with public entities. The regulations suggested that the people working with the private entities become public officials so that they were "under control of the public authority."

under the three-to-one rule. Remember that the dollars *spent* for relief in the states were bulked up by federal funds *provided by* the FERA and RFC. In fact, reported federal funds in the second quarter were the source for two-thirds of all funds spent by the states. [22] There was no reason to violate the rule because the FERA had plenty of subsection C funds to distribute and had already started distributing them. Our sense is that the FERA knew by that time that the state and local governments were not going to be able to even match the federal spending, and thus became lax in following the rule. This would seem likely because after October 1, the three-to-one rule no longer mattered any longer.[23]

II.1.4 The Civil Works Administration under Public Works Administration Rules

With unemployment still high and anticipating a harsh winter, President Roosevelt felt that Harold Ickes, who was in charge of the public works allowed by the National Industrial Recovery Act, was moving too slowly to combat the problem. On November 9, 1933 Roosevelt shifted funds to Harry Hopkins, who had been rapidly spending the FERA funds for relief, by issuing an Executive Order (No. 6420B) "by virtue of the authority vested in me under Title II of the National Industrial Recovery Act (NIRA) of June 16, 1933 (Public No. 67, 73d Congress), and for the purpose of increasing employment quickly administration." The order created the Civil Works Administration and appointed Hopkins as the FERA Administrator to "administer a program of public works as a part of, and to be included in, the comprehensive program under

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[22] The range from 33 to 36 in the number of states is based on confusion in the reporting of expenditures of funds reported by the states for the second quarter in Table 5of the FERA Monthly Report for September 1933 and the Table in the June Monthly Report for 1933. In some cases the reported amount of federal money spent by the state was zero in Table 5, but we know the FERA gave them funds in the second quarter. It is unclear how much of the FERA funds distributed appear in May and June appear in Table 5. It could be that the funds were received by the states before June 30 but not yet spent before that date. The monthly reports are all in the hearings Federal Emergency Relief and Civil Works Program. Hearing Before the Subcommittee of House Committee on Appropriations. 73d Congress, Session II. H.R. 7527. January 30, 1934.

[23] We are in the process of searching the Congressional Record and other sources to see if there were complaints about the violations.

preparation by the Federal Emergency Administration of Public Works, which program shall be approved by the Federal Emergency Administrator of Public Works (Section 1)." The order shifted $400 million from the $3.3 billion appropriated in section 220 of the NIRA.

Title II of the NIRA, titled "Public Works and Construction Projects" authorized the President to create a Federal Emergency Administration of Public Works and appoint an administrator. The agency became known as the Public Works Administration (PWA) and was headed by Harold Ickes, who was also the Secretary of the Interior. The PWA built both federal projects and provided funding for state and local projects.[24] The PWA administrator was to establish a comprehensive program of public works that included highway construction and repair, public buildings, conservation activities, and the development of natural resources, including sanitation, flood control, electricity transmission, prevention of soil erosion, and a variety of others.[25] The rivers and harbors improvements had to have been adopted by Congress

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[24] The Act allowed the PWA to ignore the civil service laws when hiring. 201(d) After the expiration of two years "after the date of the enactment of this Act, or sooner if the President shall by proclamation or the Congress shall by joint resolution declare that the emergency recognized by section 1 has ended, the President shall not make any further loans or grants or enter upon any new construction under this title, and any agencies established hereunder shall cease to exist and any of their remaining functions shall be transferred to such departments of the Government as the President shall designate: Provided, That he may issue funds to a borrower under this title prior to January 23, 1939, under the terms of any agreement, or any commitment to bid upon or purchase bonds, entered into with such borrower prior to the date o termination, under this section, of the power of the President to make loans.

[25] SEC. 202. *The Administrator, under the direction of the President, shall prepare a comprehensive program of public works, which shall include among other things the following:* (a) Construction, repair, and improvement of public highways and park ways, public buildings, and any publicly owned instrumentalities and facilities; (b) conservation and development of natural resources, including control, utilization, and purification of waters, prevention of soil or coastal erosion, development of water power, transmission of electrical energy , and construction of river and harbor improvements and flood control and also the construction of any river or drainage improvement required to perform or satisfy any obligation incurred by the United States through a treaty with a foreign Government heretofore ratified and to restore or develop for the use of any State or its citizens water taken from or denied to them by performance on the part of the United States of treaty obligations heretofore assumed: Provided, That no river or harbor improvements shall be carried out unless they shall have heretofore or hereafter been adopted by the Congress or are recommended by the Chief of Engineers of the United States Army; (c) any projects of the character heretofore constructed or carried on either directly by public authority or with public aid to serve the interests of the general public; (d) construction, reconstruction, alteration, or repair under public regulation or control of low-cost housing and slum-clearance projects; (e) any project (other than those included in the

or recommended by the Chief of Engineers of the U.S. Army. Generally, the PWA payments on such projects were supplements to the budget of the Chief of Engineers.[26] "With a view to increasing employment quickly (while reasonably securing any loans made by the United States)," the President was "*authorized and empowered, through the Administrator or through such other agencies as he may designate or create,* (1) to construct, finance, or aid in the construction or financing of any public works project included in the program prepared pursuant to section 202; (2) upon such terms as the President shall prescribe, to make grants to States, municipalities, or other public bodies for the construction, repair, or improvement of any such

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foregoing classes) of any character heretofore eligible for loans under sub- section (a) of section 201 of the Emergency Relief and Construction Act of 1932, as amended, and paragraph (3) of such subsection (a) shall for such purposes be held to include loans for the construction or completion of hospitals the operation of which is partly financed from public funds, and of reservoirs and pumping plants and for the construction of dry docks; and if in the opinion of the President it seems desirable, the construction of naval vessels within the terms and/or limits established by the London Naval Treaty of 1930 and of aircraft required therefor and construction of heavier-than-air aircraft and technical construction for the Army Air Corps and such Army housing projects as the President may approve, and provision of original equipment for the mechanization or motorization of such Army tactical units as he may designate: Provided, however, that in the event of an international agreement for the further limitation of armament to which the United States is signatory, the President is hereby authorized and empowered to suspend, in whole or in part, any such naval or military construction or mechanization and motorization of Army units: Provided further, That this title shall not be applicable to public works under the jurisdiction or control of the Architect of the Capitol or of any commission or committee for which such Architect is the contracting and/or executive officer.

[26] SEC. 203. (a) With a view to increasing employment quickly (while reasonably securing any loans made by the United States) *the president is authorized and empowered, through the Administrator or through such other agencies as he may designate or create,* (1) to construct, finance, or aid in the construction or financing of any public works project included in the program prepared pursuant to section 202; (2) upon such terms as the President shall prescribe, to make grants to States, municipalities, or other public bodies for the construction, repair, or improvement of any such project, but no such grant shall be in excess of 30 per centum of the cost of the labor and materials employed upon such project; (3) to acquire by purchase, or by exercise of the power of eminent domain, any real or personal property in connection with the construction of any such project, and to sell any security acquired or any property so constructed or acquired or to lease any such property with or without the privilege of purchase: Provided, That all moneys received from any such sale or lease or the repayment of any loan shall be used to retire obligations issued pursuant to section 209 of this Act, in addition to any other moneys required to be used for such purpose; (4) to aid in the financing of such railroad maintenance and equipment as may be approved by the Interstate Commerce Commission as desirable for the improvement of transportation facilities; and (5) to advance, upon request of the Commission having jurisdiction of the project, the unappropriated balance of the sum authorized for carrying out the provisions of the Act entitled "An Act to provide for the construction and equipment of an annex to the Library of Congress", approved June 13, 1930 (46 Stat. 583); such advance to be expended under the direction of such Commission and in accordance with such Act: Provided, That in deciding to extend any aid or grant hereunder to any State, county, or municipality the President may consider whether action is in process or in good faith assured therein reasonably designed to bring the ordinary current expenditures thereof within the prudently estimated revenues thereof. The provisions of this section and section 202 shall extend to public works in the several States, Hawaii, Alaska, the District of Columbia, Puerto Rico, the Canal Zone, and the Virgin Islands.

project, but no such grant shall be in excess of 30 per centum of the cost of the labor and materials employed upon such project (section 203a). The President was also authorized to extend the benefits, to States, counties, and municipalities (section 203d).[27] Essentially, the limits imposed here were to be imposed by expenditures by the state.

Although the CWA was supposed to distribute funds under the NIRA Section 203(a)(2) rule that the federal funds would cover no more than 30 percent of the cost of labor and materials, the agency did not succeed at meeting that requirement. Instead of less than 30 percent, federal funds financed 90 percent of the $927 million in program costs incurred by the CWA in its short life from November 1933 through March 1934. The lowest federal share for any state was 78 percent. Even if we counted only the $394 million in federal funds that came from the NIRA to the CWA and then were distributed to the states, the federal government would have accounted for an average of 81 percent of the state budgets (Works Progress Administration. 1939, pp. 25, 30-31).

II.1.5 Appropriations Bills after the CWA Before 1935

Later appropriations bills for relief imposed no limits on the allocation of funds across states on the Executive Branch. The monies available to the FERA and the CWA were spent relatively quickly in 1933 and early 1934. In response, Congress passed a new appropriations bill on February 15, 1934 (Public No. 93) that provided $950 million, "which shall be available for expenditures for such projects and/or purposes and under such rules and *regulations as the President in his discretion may prescribe:* Provided, That nothing contained in the Federal

[27] (d) The President, in his discretion, and under such terms as he may prescribe, may extend any of the benefits of this title to any State, county, or municipality notwithstanding any constitutional or legal restriction or limitation on the right or power of such State, county, or municipality to borrow money or incur indebtedness.

Emergency Relief Act of 1933 shall be construed as precluding the Federal Emergency Relief Administrator from making grants for relief within a State directly to such public agency *as he may designate."* [28] An Omnibus Appropriations bill in June 1934 provide nearly $900 million "to be allocated by the President" to carry out the purpose of a variety of agencies, including the PWA, FERA, TVA, and agricultural relief programs (Public Law No. 412, 73rd Congress, session 2, pp. 1055-1057).

When the CWA ended in March 1933 and the programs were transferred back to the FERA, Harry Hopkins also increased the oversight over FERA projects by increasing the reporting requirements. From the beginning Hopkins had pressed states to increase the amount of funding they provided for relief. [29] But Hopkins was continually frustrated in these efforts. The state and local share of relief expenditures varied from a high of 62 percent in Rhode Island to a low of 5.4 percent in Alabama. Once distributed, FERA monthly grants were legally the property of the state to which they were granted. Hopkins could only threaten to withhold funds from a state, severely constraining his ability to affect the administration of relief within a state.[30] The disputes were significant in 12 states, and Hopkins made good on his threat to withhold funds in Colorado and Missouri. Dissatisfaction with the way relief was administered led

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[28] This paragraph and the next one are based on Wallis, Fishback, and Kantor (2006). John Wallis (1981) provides a detailed description of how the bills related to relief by the House, the Senate, and Executive Branch differed in the clauses they established to determine the distribution of funds. Wallis develops a verbal model in which the House represented the interests of the larger, more urban, more industrialized states with higher unemployment relative to the Senate. The model implies that the House would appropriate more than the Senate, the House would prefer relief allocation patterns that would lead to a more positive correlation between per capita relief spending and population, while the Senate would prefer no correlation. The Senate preferred administrative control at the state level, while the House preferred control at the local level. Carrying the model forward, we might anticipate that the executive preferred control by the Executive. Wallis finds that the different versions of bills proposed generally fit this pattern.

[29] His efforts started right away. In the Monthly Report of the FERA for July 1933, he reports chastising Kentucky, Ohio, and Colorado for (pp. 20-21 of hearings in 1935).

[30] To control local corruption, the FERA established a division of investigation that looked into over a thousand complaints (ranging from the trivial to the felonious). Yet, even here Hopkins became frustrated because FERA's decentralized structure meant that the states were responsible for the investigations and the attention paid to rooting out fraud and corruption varied significantly across states (Wallis, Fishback, and Kantor 2006).

Hopkins to take over, or "federalize" the administration of relief in six more states.[31] In North Dakota, Governor Langer was indicted and convicted for "extorting kickbacks from federal government employees."[32] In Ohio, Governor Davey had a feud with Hopkins over the administration of relief. When Roosevelt finally authorized the federalization of relief in Ohio his letter began "My Dear Mr. Hopkins: I have examined the evidence concerning corrupt political influence with relief in the State of Ohio. Such interference cannot be tolerated for a moment. I wish you to pursue these investigations diligently and let the chips fall where they may. This administration will not permit the relief population of Ohio to become the innocent victims of either corruption or political chicanery"[33]

II.1.6 Relief after 1935 under the Works Progress Administration

Dissatisfaction with the FERA structure led Harry Hopkins to seek a new way to organize emergency relief. His only certain way to control the distribution of funds within states was to

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[31] The six states were Oklahoma, North Dakota, Massachusetts, Ohio, Georgia, and Louisiana. Federal officials federalized relief in Oklahoma on 2/23/34 when the governor announced that he would not apply for relief unless he had control over the distribution; in North Dakota on 3/1/34 as the result of charges that employees of the state relief administration were being assessed for political contributions; for work relief in Massachusetts on 3/7/34 because the state had a statute that all grants from the state had to be distributed on a population basis not on a need basis; in Ohio on 3/16/35 in a dispute over whether Ohio had supplied a fair share of relief funds; and in Louisiana (4/8/35) and Georgia (4/19/35) due to long-running disputes between the governors and federal administrators over the use of the funds. Hopkins withheld funds from Colorado in December 1933 and from Missouri in April 1935 until the state legislatures produced funds to help pay for relief. Threats to withhold funds went out to Alabama and Kentucky in 1933 and to Illinois in 1934. See E.A. Williams (1939, 170-8, 203-5).

[32] The charges were based on sales of subscriptions for a newspaper run by the Governor to six FERA employees with offices in the North Dakota state administration building. In the past North Dakota governors had strongly "urged" state employees to donate to their campaigns. Governor Langer's method was to sell subscriptions for the newspaper to state employees that they could then resell to others. Many in North Dakota considered the trial and conviction to be an attempt by Langer's political enemies to destroy him in a show trial. He was elected as governor again in 1936???? and as a U.S. Senator from the state in 1940. The North Dakota legislature gave Governor Langer the authority to run an embargo on durum wheat when he first entered office. North Dakota produced about 80 percent of durum wheat at the time. He declared the embargo in the fall of 1933 and used local county sheriffs to enforce it. In Langer's papers at the University of North Dakota Library, there are numerous letters from grain silo operators and producers asking permission to sell railroad cars of wheat. Langer allowed some sales and disallowed others. The embargo ran for several months and was finally ended by a court decision that declared it a violation of the interstate commerce clause. In the winter of 1933-34 Langer also tried to run an embargo on calves but this met with less success.

[33] As quoted in Brown (1940, p. 210).

create a national relief agency, staffed by civil servants answerable only to Hopkins. Yet, that solution was not acceptable to Congress or state and local governments. Meanwhile, Hopkins and others were already seeking a long run solution to relief problems.[34] A compromise between the Roosevelt administration and the two houses of Congress was ultimately reached in 1935 that gave Hopkins more control over the operation of relief and created an alternative permanent relief structure that limited the executive branch's control over the distribution of relief funds across states.

The compromise came in the form of two new laws: the Emergency Relief Appropriation Act of 1935 (ERAA) and the Social Security Act of 1935 (SSA). Both bills were introduced in January, the ERAA passed in March and the SSA in August. Two distinctions were critical: between employable and unemployable persons and between the emergency and the permanent relief programs. The ERAA was a joint resolution (Public Resolution April 8, 1935, c.48, 49 Statute 115) that stated "in order to provide relief, work relief, and to increase employment by providing for useful projects," the sum of $4 billion would be appropriated "to be used in the discretion and under the direction of the President." To distribute and administer the funds he was "authorized to establish and prescribe the duties and functions of necessary agencies within the government," which ultimately included legislation and Executive Orders that created the Works Progress Administration (WPA, Executive Order 7034 issued May 6, 1935), the Rural Electrification Administration (REA, Executive Order 7037 May 11, 1935), the Resettlement Administration (RA, Executive Order 7027, April 30, 1935), the Farm Security Administration (FSA), and the National Youth Authority (NYA). Donald Howard (1943, 147-8) reported that the WPA did not have specific requirements for percentages of WPA project costs to be provided by state and local sponsors before January 1, 1940. Through June 1940 sponsors provided 19 percent of the project costs, ranging from a high share of 34 percent from Tennessee to less than 12 percent in Delaware and Pennsylvania. Complaints that states were

[34] This section is based on Wallis, Fishback, and Kantor (2006) and Wallis (1991).

not providing their fair share led to the introduction of a requirement that sponsors provide a minimum of 25 percent of the project cost in the Emergency Relief Appropriations Act of 1939 that would begin in 1940.[35] This was emergency legislation: a one-time, temporary appropriation of funds for the relief of employable persons. The emergency appropriation was intended to tide the country over until the "permanent" relief structure could be put in place.

The Social Security Act created the permanent program, which re-established limits on how money was to be distributed across states. In fact, the Act was structured so that the states' decisions for relief and unemployment largely determined how much they would receive because they set the benefit levels for all programs. Congress placed old age insurance, what is commonly called social security today, under the administration of the national Social Security Board. It was set up as a program for individuals and their employers, and their decisions about employment and earnings determined the taxes paid and the amounts received. Administration of the needs-based public assistance programs (Aid to Dependent Children, Old Age Assistance, and Aid to the Blind) was lodged with state governments and financed by state funds and federal matching grants. The states chose benefit levels to be paid and the federal government provided matching grants of half of the amounts paid to individuals up to a maximum of $15 per month for each recipient. In setting up the programs the states had to pass legislation that made the program available throughout the state, set up an agency, provide hearings for claim denials, meet reporting requirements, and meet baseline eligibility and residency requirements. Unemployment Insurance (UI) was funded by a nationally administered payroll tax. UI programs were administered by state governments, which could draw on their individual state funds funded by the taxes paid by their employers. The federal government only directly paid 3

[35]The Emergency Relief Appropriations Act of 1935 offers a long list of project types that did not require funds from other governments but added a section g that called for $900 million to be proved for "loans or grants, or both, for projects of States, Territories, Possessions, including subdivisions and agencies thereof, municipalities, and the District of Columbia, and self-liquidating projects of public bodies thereof, where, in the determination of the President, not less than twenty-five per centum of the loan or the grant, or the aggregate thereof, is to be expended for work under each particular project." We thought this might be a 25 percent minimum but that would contradicts the claims in the text from Howard's (1943, 147-8) .

percent of the value of the state's unemployment fund for administration costs, and thus had virtually no control over spending in this part of the welfare system.[36] During the FERA administration, Hopkins had used the threat of withholding funds and federalizing relief to pressure state relief administrations. Those tools were taken away from the national administration in the Social Security Act.

The elements of the compromise were clear. In the statutes the Executive Branch was given a free hand (limited after January 1, 1940) in the distribution of emergency relief across states for the remainder of the Depression. The emergency programs created using the funds of the ERAA, of which the WPA was the most important, provided the lion's share of relief for the rest of the 1930s. In the permanent program almost all of the powers over the distribution of relief across states was determined by the matching grant rules and the states' choices of statutory benefit levels and actual payments.[37]

II. 2. The Public Works Administration

We discussed the creation of the Public Works Administration (PWA) under the National Industrial Recovery Act of 1933 when talking about the CWA relief program earlier because the CWA followed the PWA's statutory rules. Section (203a) of the 1933 Act called for the PWA to finance no more than 30 percent of the cost of the labor and materials employed upon such project (section 203a). When the Emergency Relief Appropriation Act of 1936 provided $300

[36] The Social Security Board could exercise fiscal influence in times of crisis. For example, when states exhausted their unemployment insurance trust funds, the Board could impose administrative changes on states in return for providing funds.
[37] Wallis, Fishback, and Kantor 2006; Social Security Act of 1935.

million to the PWA, it raised the maximum share provided by federal funds from 30 to 45 percent of the cost of the project.[38]

Although it spent more than the statutory maximums, the PWA appears to have stayed closer to the spirit of nonfederal involvement than the FERA and the CWA and other relief programs. Our preliminary calculations show that federal loans and grants covered an average of 54 percent of the cost of nonfederal projects between 1933 and March 1939; the shares ranged across states from 37.5 in Delaware to 85.6 in Nebraska (Public Works Administration 1939, 284-285).

II.3. Agricultural Grants and Loans

In agriculture the grants to states before the 1930s were relatively small grants for agricultural experiment stations and agricultural and mechanical colleges that were equal in size

[38] The text of the act says "In order to increase employment by providing for useful public works projects of the kind and character for which the Federal Emergency Administrator of Public Works (hereinafter called the Administrator) has heretofore made loans or grants pursuant to Title II of the National Industrial Recovery Act or the Emergency Relief Appropriation Act of 1935, the Administrator may, upon the direction of the President, use not to exceed $300,000,000 from funds on hand or to be received from the sale of securities, for the making of grants, to aid in the financing of such projects: *Provided,* That no part of the sum made available by this paragraph shall be granted .for any project unless, in the determination of the Administrator, the completion thereof can be substantially accomplished prior to July 1, 1938, and adequate provision has been made or is assured for financing such part of the entire cost thereof as is not to be supplied through the Federal Emergency Administration of Public Works: *Provided further,* That this limitation upon time shall not apply to any project enjoined in any Federal or State court: *Provided further,* That in no case shall the amount of the grant exceed forty-five per centum of the cost of the project. Nothing herein shall be construed to increase the amount of notes, bonds, debentures, and other such obligations which the Reconstruction Finance Corporation is authorized and empowered under existing law to issue and to have outstanding at any one time, and nothing herein shall be construed to limit or curtail in any way any powers which the Federal Emergency Administration of Public Works or the Administrator is now authorized to exercise.

across states. The grants for agricultural extension outreach varied but the maximum appropriation for the country as a whole was around $1 to $2 million.[39]

On the farm lending side, Congress passed ad hoc appropriations to provide emergency crop and feed loans to areas hit by drought, floods, and other emergencies. In the Farm Loan Act of 1916 12 regional federal land banks were created and each were given federal start-up money of $750,000, which was eventually repaid. The federal land banks were to invest in "national farm lending associations" formed by groups of farmers who created a mutual lending group composed of farm mortgage borrowers.[40] The Act created a Federal Farm Loan Board, which had the power to organize and charter the 12 regional federal land banks and the national farm loan associations, to grant or refuse authority to issue farm loan bonds, and to review and alter interest rates on the loan.

Declaring an emergency in agriculture, the New Deal Congress passed the Agricultural Adjustment Act of 1933 which gave the Secretary of Agriculture sweeping authority to "establish and maintain such balance between the production and consumption of agricultural commodities, and such marketing conditions therefor, as will reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy, equivalent to the purchasing power of all agricultural commodities in the base period." For all commodities but tobacco the base period ran from August 1909 to July 1914; for tobacco it was from August 1919 to July 1929. The Act asked the Secretary of Agriculture to make payments to farmers to take land out of production in an attempt to raise farmers' purchasing power. Congress controlled the distribution to some extent by limiting the

[39]From fiscal years 1930 through 1935 the grants for experimental stations were $90 thousand per state and for agricultural and mechanical colleges were $50 thousand per state from 1930 through 1935, and $70,000 each in 1936. U.S. Department of Treasure, years 1930 through 1937.
[40] The Act also created the possibility for joint-stock land banks but federal funds were not provided for start-ups.

commodities for which the program could be operated. The list of commodities eligible for the AAA program expanded over the decade.

The Agricultural Adjustment Act also amended the 1916 Federal Farm Loan Act and gave the federal land banks the ability to issue farm loan bonds with federally guaranteed interest payments and then use the funds to purchase and refinance farm mortgages.   The Farm Loan Commissioner was also given $200 million from the RFC to make mortgage loans directly to farmers to refinance their existing loans, to provide working capital for the farm operation, or to repurchase or redeem foreclosed land. No specific limits were imposed on the geographic distribution of the lending.

Table 1 provides a summary of the rules for distributing funds across states before and during the New Deal with information on average per capita annual spending on the programs in 1967 dollars and a preview of the econometric results.

III. Economic and Political Factors Influencing The Distribution of Funds Before and During the New Deal

The differences in discretion offered to the Executive Branch and the states had the potential to lead to significant changes in the distribution of the funds. To determine the change in spending patterns before and during the New Deal, we have compiled annual information on federal spending in the states from the Office of Government Reports (1939), from the *Financial Statistics of the States* in various years, Department of Treasury *Annual Reports*, *Annual Reports on Rivers and Harbors* from the Chief Engineer of the U.S. Army, and a variety of other federal and state reports.   Detailed descriptions of the construction of the data for the 1920s are provided in the data appendix here. Descriptions for the period 1930 through 1940 can be found in Fishback (2015).

For each period we estimate the relationship between the per capita federal funds and correlates from the New Deal political economy literature using two different forms of identification. First, Fleck (2008), Wright (1974), Wallis (1998) and many of the prior New Deal distribution studies used cross-sectional information that aggregated the information for the period July 1, 1933 through June 30, 1939.[41] Using Fleck's (2008) full specification of correlates, we compare the coefficients for cross sections aggregated for the New Deal period of fiscal years 1934 to 1939 to those for the aggregate of fiscal years 1932 and 1933 under President Hoover and the Republican Congress. The identification of relationships for both periods thus comes from variation across states within the same time period. In this comparison we focus the pre-New Deal analysis on the spending during the period from July 1, 1931 through June 30, 1933 to examine how the Hoover administration and the Republican Congress responded to the same dire situation that the Roosevelt administration and Democratic Congress faced when they came into office. When we expand the pre-New Deal period to encompass earlier years, the basic comparisons are qualitatively the same.

Second, like Wallis (1987, 1998), we make use of the panel of annual data that we have compiled to examine the relationships with and without fixed effects. The panel allows closer inspection of the annual responses in the distribution of funds to annual changes in the measures. Without the fixed effects the identification of the relationships comes from variation across time within the state, across states within the same year, and across states and time. When state and

[41] Wallis (1998) offers the most comprehensive look at different specifications in the literature and provides an alternative model of distribution to the one offered by Fleck (1998). At this stage we have chosen Fleck's (2008) complete specification as a binding constraint. In future drafts we plan to explore the implications of alternative specifications.

year fixed effects are added to the analysis, the identifying variation is limited to variation across time within the same state while controlling for nationwide changes. The state fixed effects control for land area and federal land ownership and the number of electoral votes, which Rob Fleck (2008) has emphasized in his analysis, while also controlling for long run climate, location, and other unchanging features of each the state that might have influenced the distribution of fund. One of these key features is long run state attitudes toward the acceptance of federal funds. To obtain funds, states had to apply for them, and Wallis (1987), Fishback, Kantor, and Wallis (2003), and Wallis, Fishback, and Kantor (2006) and many narrative state level studies find that these state attitudes were important and not easily measured determinants of the amount of funds distributed.

Third, we also examine the factors influencing the distribution of funds for specific programs both with the aggregate cross-sections and with the panel analysis. These comparisons are important because Congress gave different degrees of executive control over the cross-state distribution of funds for different programs. The central goal of the paper is to examine how increased executive control altered how the executive distributed the funds.

In the cross-section analysis, we estimate the following equation with Ordinary Least Squares (OLS):

$$g_i = \beta 0 \quad + \beta_1 \Delta y_i + \sum_{k=1}^{K} \beta_{k+1} p_i^k + \sum_{l=1}^{L} \gamma_l e_i^l + \varepsilon_i$$

where g_i is annual per capita government spending in state *i* between 1934 and 1939, Δy_i is the annual average income drop in state *i* between 1929 and 1932, p_i^k with $k \in \{1, K\}$ is a vector of political variables and e_i^l with $l \in \{1, L\}$ is a vector of economic variables. In estimating the equations, we essentially use the same variables as Rob Fleck (2008) did in his analysis. The results will look different here than in Fleck's equations for multiple reasons. We have updated the measures of New Deal spending using the updated measures of spending by year discussed in the data section. Since we had annual information as a starting point, we adjusted all dollar values for the New Deal spending and state per capita income measures for inflation and deflation using the Consumer Price Index with 1967 as the base year. We also use annual averages for the New Deal spending and for the change in state per capita income between 1929 and 1932 to make spending and income measures more comparable in dollar-for-dollar terms. We use the actual change in per capita income between 1929 and 1932, which is negative in all cases, while Fleck uses the absolute value of the changes in calling it the fall in income. Thus, if the government spending counteracted a fall in income, we expect a negative coefficient for the measure here, which would be the equivalent to a positive coefficient in the Fleck (2008) papers. for the Fleck version. Finally, we use per capita state income in 1929 rather than 1932 so we can make direct comparisons between the responses to the per capita level of state income between the two periods.

When we perform the analysis for the Hoover Era we use the change in state per capita income from 1929 to 1931 and the standard deviation of democratic presidential votes covers the period 1896-1928 to avoid simultaneity. The measure of annual federal funds per capita distributed during the Hoover administration covers the fiscal years 1932 and 1933. Fiscal year 1933 was dominated by the decisions of the Hoover administration and Republican-dominated Congress because Roosevelt did not take office until March 1933 and the New Deal programs generally did not spend much before late June.

When we estimate the relationships with the panel data set with annual dataset for each state, we use various specifications. The fullest specification with fixed effects takes the following form:

$$g_{i,t} = \beta 0 \quad + \beta_1 y_{i,t} + \sum_{k=1}^{K} \beta_{k+1} p_{i,t}^{k} + S_i + T_t + \varepsilon_{i,t}$$

where $g_{i,t}$ is real per capita federal spending in state *i* in fiscal year *t*, $y_{i,t}$ is real per capita state income in state *i* in year *t*, $p_{i,t}^{k}$ (with $k \in \{1, K\}$) is a vector of variables that describe the political situation in state *i* at time *t*, S_i and T_t are state and time effects, respectively. When performing this analysis, the federal spending per capita ($g_{i,t}$) for a year like 1933 covers the fiscal year July 1, 1932 to June 30, 1933. The economic and political variables in the regressions are therefore lagged by a year or more. For example, the income variable is for calendar year 1932, which imparts a six-month lag to the relationship between government spending and income. In addition, the mean and standard deviation of support for Democratic presidents runs from the period 1896 to 1928 to reduce the potential for simultaneity.[42] To control for endogeneity in the coefficient for per capita income, we have experimented with using a shift-share instrument based on the structure of manufacturing and agriculture in 1919 and annual changes in national totals for various industries and crops. However, the use of the instrument does not pass the first-stage tests for instrument strength. Therefore, we are still seeking new instruments.

III. 1. Cross-Sectional Results, Fiscal Years 1932-1933 versus Fiscal Years 1934-1940

[42] We are exploring the use of a shift-share instrument for per capita income based on each state's share of the national total for more than 10 crops and 20 manufacturing industries in 1919 and the changes in the national totals in these categories between 1919 and 1940. When we use this instrument, the swing-voting coefficient is generally the same as the fixed effect coefficients. In most cases, the coefficient of per capita income changes from negative in the fixed effects analysis to positive in the IV analysis with fixed effects.

The results for total grants in Table 2 show that that there were several similarities in the factors associated with the distribution of funds under the Hoover and Roosevelt administrations. Both administrations spent more in areas with more senate seats per capita and less in areas with more house seats per capita.[43] Both spent more in states with more federal land, higher per capita incomes in 1929, more farmers per capita, and higher farm value per capita. Neither spent statistically significantly more funds in areas where per capita incomes fell more during the Great Contraction.[44]

Comparisons of the standardized coefficients in Table 2 show that the amount of variation in the fund distribution was explained most by the amount of federal land under both the Hoover and Roosevelt administrations. A state with one standard deviation more federal land per capita tended to receive 1.03 standard deviations more in average annual federal grants under the Hoover administration and 0.65 standard deviations more during the New Deal. The rest of the standardized coefficients are smaller in both eras.

The major difference between the Roosevelt and Hoover administrations was in their responses to swing voting. The Roosevelt administration spent about $2 more in states where the standard deviation of the percent voting Democrat for president from 1896 to 1932 was one

[43] The sum of senators per capita and house members per capita is a measure of electoral votes per capita, which can give a sense of how much clout each voter in each state has in the electoral college. Since there are two senators per state senators per capita has the same variation as the inverse of population. Wallis (1998) argues that such an inverse of the population belongs in the regression because the federal government has incentives to make sure that every state gets some minimum baseline spending. When dividing through total spending to get per capita spending the constant becomes the inverse of population. Fleck (2008) and others put a different interpretation on this. Since the number of House members is determined by population, the variation in House members per capita essentially comes from the population differences that do not fit the formula properly. We include these measures because they are common in the literature but they can have multiple interpretations.

[44] In the cross-sectional analysis for annual average total New Deal grant spending per capita between 1934 and 1939 in Table 2, the qualitative results are the same as those presented by Fleck (2008) in the following ways. There are two exceptions. The coefficient of the per capita income level in 1929 is positive and statistically insignificant compared to Fleck's negative and statistically insignificant income for per capita income in 1932. The coefficient of the change in per capita state income in both estimations suggest that the New Deal spending counteracted the drop in income but the coefficient is statistically significant in Fleck's analysis but not statistically significant in ours.

percentage point higher. This translates into a standardized coefficient of 0.12, which is exceeded by only the land measures and house seats per capita in terms of explanatory power. In contrast, the Hoover era coefficient for the swing voting measure is negative and statistically insignificant. In his 2008 paper Fleck states that the statistical significance of the swing voting measure is due not to its inherent importance in the process of the distribution of the federal funds. Instead, it is due to the fact that it was highly correlated with the land variables. He argues that the same amount of variation can be explained by replacing the swing voting measure (along with majority of the political variables) with the land and farm variables. The results here and in Fleck's (2008) full specification show that this is not entirely true. This specification shows that there is a separate effect associated with swing voting even after the analysis controls for the land and farm variables. It is clear that there would be omitted variable bias in the swing voting coefficient had the land and farm variables been left out of the equation. In turn, there would also be omitted variable bias in the land and farm variables when the swing voting measure is left out of the equation. Therefore, it is important to examine the measured effects when the swing voting and the land and farm variables in the equation, as we have done here.

It is tempting to say that the swing voting did not matter to the Hoover administration and Republican Congress when they were allocating federal funds to states because there was not much to allocate before Roosevelt came out with his New Deal program, but real federal spending increased by 88% between 1929 and 1932, which is a rate of growth greater than during any three consecutive years of the New Deal. The difference in results suggests that the greater control Congress imposed on federal spending prior to the New Deal served to limit the impact of swing voting in Presidential elections on the distribution of funds across states. The result does not imply that there was no politicking going on before the New Deal. The rules for distribution set in Congressional legislation certainly would have favored some states over others; therefore, we should expect that members of Congress and the President were considering their constituents' self-interest in negotiating over the rules. The results here show that when the New Deal gave the executive branch more leeway in distributing funds, a specific brand of presidential politicking came into play that was prevented by the process earlier.

III.2 Program by Program Cross-Sectional Analysis

A look at total spending tells only part of the story because the extent to which Congress gave the executive branch discretion varied substantially. Table 1 provides thumbnail sketches of the amount of discretion Congress awarded the executive based on our discussion above. The main question is: On what factors did the Hoover and Roosevelt administrations focus when Congress gave them discretion over the distribution of funds across states?

The RFC relief loans and the New Deal relief programs were the first efforts by the federal government to provide poverty and unemployment relief for civilians. The only limit on the RFC loans was a maximum of 15 percent for any one state. New Deal relief grants accounted for roughly half of all grants and loans distributed across states. The statutes for the FERA of 1933-1935, the CWA from November 1933 to March 1934 gave the Executive branch a great deal of authority over the distribution of funds across states. In the 1935 compromise over emergency relief and long run federal activity, Congress gave the President continued control over the WPA's cross-state distribution of emergency relief while increasing his control over within state distributions. Meanwhile, Congress established matching rules for the federal expenditures by the Social Security Administration for the three public assistance programs.

The standardized coefficients for the relief programs in Table 3 show that the RFC loans were not positively related to swing voting, while most of the New Deal programs were. The standardized swing voting coefficient was -0.09 for the RFC relief loans. The negative standardized coefficients of -0.85 for per capita income change between 1929 and 1931 and -1.24 for average per capita income in 1929 shows that one standard deviation reductions in those measures were associated with increase in RFC relief loans per person of 0.85 and 1.24 standard deviations, respectively. The WPA and the CWA also tended to spend more in areas where the change in income was more negative, and 1929 incomes were lower. In contrast with the Hoover administration's choices, however, the swing voting standardized coefficients were strongly positive and statistically significant for the FERA and the CWA. The FERA swing standardized coefficient of 0.52 is the third largest in absolute value behind the land standardized coefficients, while the CWA coefficient of 0.54 is the second largest effect behind the -0.72 coefficient for retail sales per capita in 1929. The WPA had a smaller standardized swing coefficient of 0.28, but it was statistically significant at only the 13 percent level. Meanwhile, the CCC distribution had virtually no correlation with swing voting while having strong positive correlation with federal lands and areas with smaller populations (negative sign on senate seats per capita). The standardized coefficient of the SSA public assistance matching grants was a statistically significant 0.37. The results for the FERA, CWA, and less so for the WPA suggest that the Roosevelt administration used its executive control of the cross-state distributions to spend more in areas with more swing voting, even after controlling for land areas and populations in the way Fleck suggested. However, the SSA results suggest that there was more to the story because Congress had established tight matching rules and the states themselves were driving most of the distribution decisions.

The rest of the spending programs for veterans, public works, and the AAA did not show strong and statistically significant relationships with the swing voting measure in Tables 4, and 5. The federal per capita spending on veterans, highways, reclamation, and rivers and harbors and flood control were common forms of spending both before and after the New Deal. The only change in statutes related to the distribution of funds across states for these programs under the New Deal was the elimination of the matching grant requirement for the highway spending. The standardized coefficients in Table 4 show that the New Deal did not lead to much change in the factors influencing the distribution of federal funds between the Hoover and Roosevelt Eras. Most of the signs of the coefficients of factors do not change between periods and when they do one or both of the coefficients is statistically insignificant.

President Hoover and the Republican Congress originally created the RFC in January 1932 to make loans to banks, industry, and farms and gave the RFC a great deal of discretion over the distributions. The Roosevelt administration used the RFC in the same way and also to provide startup financing for many of its new programs. Neither version of the RFC had a statistically significant response to swing voting, while the Hoover RFC spent more where income dropped the most between 1929 and 1933 and the Roosevelt RFC spend less in areas with more unemployment in 1937 and higher farm values.

The New Deal created the PWA's federal and nonfederal programs and the AAA farm program. The federal PWA program focused on building projects on federal lands while the nonfederal projects were proposed by state and local governments and federal spending share of the costs was supposed to be limited to no more than 30 percent (later 45 percent). The standardized coefficients for swing voting were negative and not statistically significant for each. Both PWA programs tended to spend more in areas with more land and in areas with more income in 1929 and a smaller drop in income between 1929 and 1932. As would be expected, the AAA spending had the strongest relationships with the farm population per capita and the farm value per acre. The standardized swing voting coefficient for the AAA was 0.23, about the size of the WPA coefficient, but it was statistically significant at only the 17 percent level.

III.3 Panel Analysis for Grants and Loans Per Capita

The panel analyses in the second phase of the project focuses on *annual* adjustments in the distribution of funds across states to the political and economic correlates of the period. In these comparisons, we split the sample into two time periods, the Republican Era from 1922 to 1933 and the New Deal Era from 1934 to 1939. In this case the relationships between the federal spending and the correlates are identified by changes over time *within the same state* while also controlling for nationwide shocks like changes in the money supply and federal regulation. The results tell largely the same story as the cross-sectional results despite the expansion in data covered in the earlier period and the new focus on year-to-year responses within states over time. The major difference between the New Deal and pre-New Deal periods is in the relationship between federal spending and swing voting once fixed effects are incorporated in the analysis. In this situation the state fixed effects control for time invariant features that include the land area measures and electoral votes that were Fleck's focus, yet they also control for another key feature not handled by Fleck, which was the long run attitudes of the states toward accepting federal grants.

As in the cross-sectional analysis, the swing voting coefficients for total grants in Table 6 are much larger and more positive during the New Deal era than in the Republican era that preceded it.[45] In the OLS analysis without fixed effects the swing voting coefficient of 1.12 for the Republican era is roughly one-tenth of the 9.64 coefficient during the New Deal. One reason for the difference in the size of the coefficient is that the mean annual federal grants during the New Deal were roughly 6 times the pre-New Deal level. The standardized coefficients in Table 7 show that a one-standard deviation rise in the swing voting measure raised the per capita grants by 0.27 standard deviations prior to the New Deal and 0.39 standard deviations during the New Deal. Once fixed effects are added to the analysis to control for land area, federal land, and long run state attitudes, the Republican era swing voting coefficient turns negative and statistically insignificant. The New Deal era swing coefficient is still a positive 6.62 but is only statistically significant at the 13 percent level.

In both periods the fixed effects estimates for the coefficients of total grants per capita are negatively associated with per capita income measures and are statistically significant. In Table 6 one less dollar of per capita income in a state was associated with 2.6 cents more in grants per capita prior to the New Deal and 8 cents more during the New Deal. The standardized coefficients in Table 7 are more similar, at -0.53 and -0.45, respectively.

The analyses for the per capita loans in Table 6 and 7 show that the swing voting measure has a strong effect in the OLS estimation that is eliminated when the fixed effects control for time-invariant features of the states. In both periods the fixed effects estimates show that a dollar reduction in per capita income was associated with a one-cent rise in loans per capita with standardized coefficients of -0.28 prior to the New Deal and -0.09 during the New Deal.

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[45] One thing to note is that the swing voting measure has three values in the 1922-1933 sample and two values in the 1934-1940 sample. In the 1922-1933 sample it has the value from 1896 through 1920 for the years 1922 through 1925; 1896 through 1924 for the years 1926 through 1929 and 1896 through 1928 for the years 1930 through 1933. In the 1934-1940 sample it changes from the 1896 through 1932 value after 1937.

III.4 Program by Program Panel Analysis

The standardized coefficients from the program-by-program analysis with the annual panel in Table 7 are similar to the cross-sectional analysis in the sense that the new forms of relief spending were responsive to swing voting. The standardized coefficient is larger than in the cross-sectional analysis at 0.93 and is statistically significant. As in the cross-sectional analysis, rivers and harbor spending before and during the New Deal, PWA spending during the New Deal and highway spending and Bureau of Reclamation loans before the New Deal were not positively related with swing voting. However, there was a difference from the cross-sectional analysis because New Deal highway spending and New Deal Bureau of Reclamation loans also were strongly positively related with the swing voting measure in the panel analysis. The Roosevelt administration was given more control over New Deal highway spending when Congress eliminated the state matching constraint, but the relationship with swing voting only shows up in the annual analysis. Meanwhile, Congress would have had to have joined the Executive in using the cross-state distribution of Bureau of Reclamation funds to attract swing voters during the New Deal because there was no change in the statutory authority over Bureau of Reclamation projects.

III. Conclusions

Prior to the New Deal the federal government distributed much smaller amounts of funding, mostly for highways, river and harbor projects, dams, and support of veterans, across the states. In the 1920s in agriculture about $1 million in grants each year were distributed across state in each of the following programs: agricultural extension, agricultural experiment stations, agricultural and mechanical colleges, and for public health for children. In most cases the enabling legislation established specific rules for the cross-state distributions or Congress explicitly authorized the projects.

During the Great Contraction from 1929 to 1931, the Hoover administration expanded federal funding within existing programs but refused to designate the Depression as an economic emergency. In January 1932, however, Hoover and the Republican Congress finally acceded to calling the Depression an Emergency and began to pass out loans to banks, industry, and farms. In July 1932 they provided for civilian relief for the first time in the Emergency Relief and Construction Act. There was one key demand: the loans could only be made after the state and local governments had shown their funds were exhausted.

After Franklin Roosevelt and Democratic majorities in both Houses of Congress were elected in a landslide, they used the emergency language on a wide range of fronts to distribute grants and loans in several broad categories. In most of the early acts during the First Hundred Day the relief and public works programs, like the FERA and the PWA, Congress maintained some control over the rules of distribution across states, typically requiring some type of match from state and local governments. Within a few months the administrators found that they could not distribute much money while following the rules. Declaring a continuation of the Emergency, Congress then gave increasing power to the Executive Branch to distribute the funds across states. In the farm programs Congress gave the Executive substantial control almost immediately.

What did the Hoover and Roosevelt administrations do with the extra discretion they were given? In cross-sectional analysis the major change between the Hoover and Roosevelt administrations was a move to a strong positive relationship between the amount of per capita funds and swing voting in the states after controlling for the extent of federal land and the actions of the states.

This difference in responsiveness did not occur across all programs. The New Deal created the PWA federal and nonfederal public works programs and the federal government routinely violated the restrictions on the federal government's share of the costs. Yet, the results show no sign that the PWA programs were responsive to swing voting. The President had extensive discretion over the CCC, which also showed no positive relationship to swing voting. The decision rules for programs for veterans, reclamation dams, and rivers and harbors stayed the same in the 1920s and 1930s. In the cross-sectional analysis none of the three were very responsive to swing voting in either period after controlling for federal lands and state grant demands, but the annual variation in the Bureau of Reclamation funds shows a stronger positive relationship with swing voting despite the absence of an explicit rule change. The relationships for highways are also mixed but in this case the Roosevelt administration was given more discretion. The National Industrial Recovery Act of 1933 largely kept the distribution formula from previous highway acts but eliminated the state matching feature. Without the state matching, the annual highway distributions under the New Deal were highly responsive to swing voting, but the cross-sectional analysis does not find the same strong positive relationship.

In both the cross-section and in the annual panel the differences in responsiveness to swing voting largely came through the distribution of relief funds. In both the Hoover and Roosevelt eras the President had extensive discretion over the distribution of most of the relief funds. The RFC's distribution of relief loans in fiscal year 1933 was not positively related with swing voting, while the distribution of total relief was strongly positively related to swing voting in both the cross-sectional and annual panel analysis.[46]

However, the story is somewhat more complicated when we look at the individual relief programs. The strongest positive relationship with swing voting was found for the FERA and CWA relief programs under the First New Deal. During the second New Deal there was a positive but weaker relationship for the WPA. One might be tempted to say that it was the discretion awarded the executive that allowed the Roosevelt administration to use the relief funds to attract more swing voters. That may be true, but the results also show that the SSA public assistance grants were also strongly correlated with swing voting. The executive had very little control over these grants because Congress set them up as matching grants and the states were the units deciding how much would be spent.

Overall, the results show signs that the Roosevelt administration used its expanded discretion in some areas of relief and possibly highways to spend more money where there were more swing voters. These patterns added real fuel to the fiery criticisms of the New Deal as a means of getting Democrats reelected by its opponents. During the War on Poverty in the 1960s, Congress imposed a set of tight rules on the distribution of funds under the new poverty programs (Bailey and Duquette 2014). The great irony is that the long run state/federal public assistance programs under the Social Security Act had strong matching rules in which each state's decisions largely determined how much was spent there. Yet, the distributions across states in these programs also showed a strong relationship with swing voting.

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[46] The standardized swing voting coefficient for all relief spending in the cross-section was a statistically significant 0.23.

Table 1
Thumbnail Sketch of Legal Changes for Programs with Average Annual Per Capita Funds per State and Preview of Regression Results

	Average Annual Per Capita Funds for States (1967$) in Fiscal Years		Thumbnail Descriptions of Rules for Distribution		Statistically Significant Effect of Swing Voting in Cross Section	
Program	1932-1933	1934-1939	Pre-New Deal	New Deal	Pre-New Deal	New Deal
Veterans Pensions, Homes, and Disability	14.58	11.60	Congressional Control, mostly based on pensions payments to individuals and locations of soldiers and sailors homes and hospitals	Same	No	No
Highways	7.05	8.75	Congressional Formula (1/3 land area, 1/3 population, 1/3 postal/star roads) and matches by states	7/8ths of original formula but no state matching for NIRA state funds	No	No
Rivers and Harbors and Flood Control	2.33	3.46	Congressional Authorization of each project	Congressional Authorization of each Project but also supplemented with Relief and NIRA public works funds. Clause in NIRA of 1933 suggests some control for Chief Engineer of the Army.	No	No
Bureau of Reclamation No-Interest Loans	5.25	7.28	Congress authorized all projects	Same	No	No
Relief: Reconstruction Finance Corporation Loans, FY 1933	0.01	0.00	Maximum of 15 percent to any state; violated for Illinois	Ended Before New Deal	No	----

Relief: Federal Emergency Relief Administration Grants, FY 1934-1935	0.00	32.92	Did Not Exist	Originally limited state amounts on half of funds until October 1, 1933; President's discretion thereafter.	__	Yes
Relief: Civil Works Administration Grants, FY 1934	0.00	17.50	Did Not Exist	President's discretion.	__	Yes
Relief: Emergency Conservation Work/Civilian Conservation Corps	0.00	3.42	Did Not Exist	President's discretion.	__	No
Relief: Works Progress Administration, FY 1936-1942	0.00	30.08	Did Not Exist	President's discretion until January 1940, when sponsors required to provide minimum of 25% of funding.	__	No
Relief: Social Security Public Assistance	0.00	4.15	Did Not Exist	Matching grants for benefit levels chosen by states.	__	Yes
Public Works Administration Federal Grants	0.00	3.40	Did Not Exist	President's discretion	__	No
Public Works Administration Nonfederal Grants	0.00	3.44	Did Not Exist	Matching grants: PWA provide no more than 30% until 1936 when raised to 45%.	__	No
Farm Mortgages	0.00	1.60	Congressional start up funds for Land Bank Commissioner mortgages (repaid by 1930), but total loans determined by demand from farmers in cooperative arrangements	Farm Credit Administration had more direct authority over mortgage lending	__	Not done yet
Farm Production and Emergency Loans	1.18	1.79	Congressional Emergency Authorizations	Farm Credit Administration making direct loans	__	Not done yet
Agricultural Adjustment Administration	0.00	13.01	Did Not Exist	Congress chose crops; Secretary of Agriculture chose parameters for each crop.	__	No
RFC loans for banks, industry, and farms	28.13	7.67	President's discretion	President's discretion	No	No

Table 2
OLS Regression Results for Annual Average Per Capita Grants in 1967$ for Fiscal Years 1932-1933 and 1934-1939

	Mean St Dev	Coefficients and (t-statistics) 1932-1933	 1934-1939	Standardized Coefficients 1932-1933		 1934-1939	
Standard Deviation of Pct. Democratic Votes for President, 1896 to 1928	8.65	-0.427		-0.05			
	4.41	(-1.24)					
Standard Deviation of Pct. Democratic Votes for President, 1896 to 1932	10.13		1.986			0.12	*
	4.24		(1.92)				
Senate Seats per Capita	0.002	1373.10	815.743	0.12	*	0.04	
	0.004	(1.78)	(0.51)				
House Seats Per Capita	0.004	-4796.5	-15915	-0.14		-0.26	*
	0.001	(-1.17)	(-1.80)				
Annual Average Change in Real Per Capita Income, 1929-1931	-98.36	0.022		0.02			
	40.52	(0.45)					
Annual Average Change in Real Per Capita Income, 1929-1932	-114.3		-0.033			-0.02	
	39.36		(-0.28)				
Real Per Capita Personal Income in1929	1197	0.007	0.017	0.08		0.10	
	434.7	(0.64)	(0.78)				
Federal Land Per Capita	0.039	282.552	320.1	1.03	*	0.65	*
	0.145	(7.44)	(3.80)				
Nonfederal Land Per Capita	0.043	-62.147	464.74	-0.09		0.36	*
	0.056	(-1.58)	(2.73)				
Percent Federal Land	13.45	0.021	0.461	0.01		0.13	*
	20.63	(0.18)	(1.94)				
Unemployment Rate in 1930	5.75	0.005	-2.705	0.00		-0.09	
	2.25	(0.00)	(-0.82)				
Unemployment Rate in 1937	4.22		8.026			0.10	*
	0.89		(2.22)				
Farm Population Per Capita, 1930	0.292	13.729	30.69	0.06		0.07	
	0.161	(0.41)	(0.50)				
Farm Value Per Acre 1930	0.635	4.055	7.88	0.06		0.06	
	0.550	(1.62)	(1.05)				
Constant		29.278	67.15				
		(1.03)	(1.00)				
Mean of Dependent Variable		32.43	125.06				
Standard Deviation of Dep. Variable		39.64	71.07				

*Statistically significant at the 10 percent level.

Notes. Standardized coefficients are the number of standard deviations by which the dependent variable changes when there is a one standard deviation increase in the correlate.

Table 3

Standardized Coefficients from OLS Regressions for Real Relief Funds Per Capita

	RFC Loans 1933	FERA 1934-35	CWA 1934	CCC 1934-9	WPA 1936-39	SSA 1936-39
Standard Deviation of Percent Democratic Votes for President, 1896 to 1928	-0.09					
Standard Deviation of Percent Democratic Votes for President, 1896 to 1932		0.52 *	0.54 *	-0.04	0.28	0.37 *
Senate Seats per Capita	-0.38 *	-0.41 *	-0.19	0.50 *	-0.38 *	0.06
House Seats Per Capita	0.52 *	-0.41	0.13	-0.22	-0.25	0.51 *
Annual Average Change in Real Per Capita Income, 1929-1931	-0.85 *					
Annual Average Change in Real Per Capita Income, 1929-1932		-0.02	-0.34 *	0.04	-0.40 *	0.10
Real Per Capita Personal Income in1929	-1.24 *	-0.04	-0.72 *	0.00	-0.23	0.07
Federal Land Per Capita	-0.15	0.82 *	0.25	0.22	0.62 *	-0.85 *
Nonfederal Land Per Capita	-0.28 *	0.60 *	0.30	0.05	0.24	-0.07
Percent Federal Land	0.52 *	-0.24	-0.01	0.46 *	-0.14	0.67 *
Unemployment Rate in 1930	0.42 *	-0.55 *	-0.07	0.11	0.10	0.26
Unemployment Rate in 1937				-0.12	0.42 *	-0.09
Farm Population Per Capita, 1930	-0.42	-0.58 *	-0.69 *	0.14	-0.36	-0.21
Farm Value Per Acre 1930	-0.22	-0.16	-0.14	-0.05	0.11	0.19
Dependent Variable						
Mean	0.01	32.92	17.50	3.42	30.08	4.15
Standard Deviation	0.01	16.46	6.09	3.89	10.54	2.14

*Statistically significant at the 10 percent level.

Notes. Standardized coefficients are the number of standard deviations by which the dependent variable changes when there is a one standard deviation increase in the correlate. Each column represents a regression. Means and standard deviations of correlates are in Table 2.

Table 4
Standardized Coefficients from OLS Regressions for Real Federal Funds Per Capita for Categories Spanning the 1920s and 1930s

	Veterans' Spending		Highways		Reclamation Bureau		Rivers and Harbors	
	1932-33	1934-39	1932-33	1934-39	1932-33	1934-39	1932-33	1934-39
Standard Deviation of Percent Democratic Votes for President, 1896 to 1928	-0.37 *		0.05 *		0.03		-0.36	
Standard Deviation of Percent Democratic Votes for President, 1896 to 1932		-0.17		0.02		-0.01		-0.22
Senate Seats per Capita	-0.03	-0.34 *	0.17 *	0.22 *	-0.01	-0.03	0.47	0.41
House Seats Per Capita	-0.43	-0.72 *	-0.04	0.01	-0.23 *	-0.01	0.58	0.18
Annual Average Change in Real Per Capita Income, 1929-1931	0.30		0.01		0.00		-0.16	
Annual Average Change in Real Per Capita Income, 1929-1932		0.09		-0.03 *		-0.04		0.03
Real Per Capita Personal Income in1929	0.30	0.19	0.03	-0.01	0.00	0.04	0.25	0.37
Federal Land Per Capita	-0.04	0.55	0.65 *	0.60 *	1.41 *	0.95 *	-0.99 *	-0.78
Nonfederal Land Per Capita	0.45 *	0.38 *	0.28 *	0.25 *	-0.32 *	0.09	-0.14	0.40
Percent Federal Land	0.53 *	0.60 *	-0.06 *	-0.03 *	-0.10 *	-0.02	0.25	0.18
Unemployment Rate in 1930	0.24	-0.05	0.04 *	0.01	-0.03	-0.04	-0.12	0.13
Unemployment Rate in 1937		-0.13		0.00		-0.06		0.35 *
Farm Population Per Capita, 1930	0.06	-0.16	0.05	0.06 *	0.00	-0.02	0.39	0.59
Farm Value Per Acre 1930	0.32 *	-0.04	0.07 *	0.04 *	0.04	-0.06	-0.21	-0.05
Dependent Variable								
Mean	14.58	11.6	7.05	8.75	5.25	7.28	2.33	3.46
Standard Deviation	4.26	4.34	10	11.4	28.3	28.6	3.79	5.33

*Statistically significant at the 10 percent level.

Notes. Standardized coefficients are the number of standard deviations by which the dependent variable changes when there is a one standard deviation increase in the correlate. Each column represents a regression. Means and standard deviations of correlates are in Table 2.

Table 5
Standardized Coefficients from Regressions for Real Per Capita PWA, AAA, and RFC Funds

	PWA Federal, 1934-39	PWA Non-federal 1934-39	AAA 1934-1939	All RFC Loans, 1932-33	All RFC Loans, 1934-39
Standard Deviation of Percent Democratic Votes for President, 1896 to 1928				0.24	
Standard Deviation of Percent Democratic Votes for President, 1896 to 1932	-0.12	-0.16	0.23		0.11
Senate Seats per Capita	-0.07	-0.16	-0.03	0.06	-0.32
House Seats Per Capita	-0.33	0.19	-0.02	-0.16	-0.24
Annual Average Change in Real Per Capita Income, 1929-1931				-0.43 *	
Annual Average Change in Real Per Capita Income, 1929-1932	0.43 *	0.33	-0.02		-0.003
Real Per Capita Personal Income in1929	0.64 *	1.18 *	0.01	-0.45	0.5
Federal Land Per Capita	0.26	-0.25	-0.05	0.68	0.5
Nonfederal Land Per Capita	0.58 *	0.04	0.17	-0.16	0.06
Percent Federal Land	0.35 *	0.59 *	-0.24	-0.38	-0.08
Unemployment Rate in 1930	-0.07	0.34	-0.11	-0.13	0.27
Unemployment Rate in 1937	-0.25	0.05	0.15 *	-0.29	-0.33 *
Farm Population Per Capita, 1930	-0.02	0.71	0.37 *	-0.29	0.25
Farm Value Per Acre 1930	-0.21 *	0.26	0.56 *	0.003	-0.32 *
Mean of Dependent Variable	3.40	3.44	13.01	28.13	7.67
Std. Deviation of Dependent Variable	3.94	1.21	13.64	31.06	6.56

*Statistically significant at the 10 percent level.

Notes. Standardized coefficients are the number of standard deviations by which the dependent variable changes when there is a one standard deviation increase in the correlate. Each column represents a regression. Means and standard deviations of correlates are in Table 2.

Table 6
Regression Coefficients and t-statistics for Annual Panel of Real Per Capita Grants and Loans in 1922-33 and 1934-1939

	All Per Capita Grants in 1967$				All Per Capita Loans in 1967$					
All Per Capita Grants in 1967$	Fiscal Years 1922-1933		Fiscal Years 1934-1940		Fiscal Years 1922-1933		Fiscal Years 1934-1940		Means and Std. Dev.	
	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects	1922-33	1934-1940
Per Capita Personal Income in 1967$	-0.001	-0.026	0.001	-0.08	-0.01	-0.01	-0.03	-0.01	1057.6	1089.1
	-0.33	-4.85	0.1	-3.18	-4.4	-2.37	-4.12	-0.57	392.8	404.5
Standard Deviation of Percent Democratic Votes for President, 1896 to Most Recent Election	1.12	-0.20	9.64	6.62	1.01	-0.13	3.81	0.05	8.34	10.71
	5.56	-0.39	10.8	1.54	7.24	-0.25	6.9	0.01	4.63	4.17
Governor is a Democrat	-1.96	0.16	-9.96	-3.24	0.22	-3.41	-6.13	-6.00	0.487	0.806
	-0.85	0.09	-0.84	-0.54	0.13	-2.18	-0.84	-1.08	0.5	0.4
Governor and Majority in Both State Houses are Democrats	-1.59	-1.99	20.39	6.23	1.33	-2.21	-4.97	21.43	0.311	0.453
	-0.55	-0.75	2	0.93	0.64	-0.83	-0.79	3.41	4.63	0.498
State Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes		
Year Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes		
Mean of Dep. Var.	18.6	18.6	116.2	116.2	8.06	8.06	36.2	36.2		
Std. Dev. Of Dep. Var.	19.1	19.1	71.2	71.2	14.66	14.66	42.7	42.7		

Notes. Each column represents a regression with means and standard deviations of correlates on far right.

Table 7
Standardized Coefficients from Annual Panel Regressions for Real Per Capita Funds in 1922-1933 and 1934-1940

		Standardized Coefficients										Dependent Variable	
		Per Capita Personal Income in 1967$		Standard Deviation of Percent Democratic Votes for President, 1896 to Most Recent Election		Governor is a Democrat		Governor and Majority in Both State Houses are Democrats		State Fixed Effects	Year Fixed Effects	Mean of Dep. Var.	Std. Dev. Of Dep. Var.
All Grants, FY 1922-1933	OLS	-0.02		0.27	*	-0.05		-0.39		N	N	18.6	19.1
	Fixed Effects	-0.53	*	-0.05		0.00		-0.48		Y	Y	18.6	19.1
All Grants, FY 1934-1940	OLS	0.01		0.56	*	-0.06		0.14	*	N	N	116.2	71.2
	Fixed Effects	-0.45	*	0.39		-0.02		0.04		Y	Y	116.2	71.2
All Loans, FY 1922-1933	OLS	-0.27	*	0.32	*	0.01		0.42		N	N	8.06	14.66
	Fixed Effects	-0.27	*	-0.04		-0.12	*	-0.70		Y	Y	8.06	14.66
All Loans, FY 1934-1939	OLS	-0.28	*	0.37	*	-0.06		-0.06		N	N	36.2	42.7
	Fixed Effects	-0.09		0.00		-0.06		0.25	*	Y	Y	36.2	42.7
Grants Fixed Effects Results													
Relief 1934-39	Fixed Effects	-0.27		0.93	*	-0.05		0.07		Y	Y	34.95	14.96
Highway 1922-33	Fixed Effects	-0.19		-0.45	*	0.00		-0.40		Y	Y	3.88	6.45

Highway 1934-40	Fixed Effects	-0.01	*	0.78	*	-0.04		-0.03		Y	Y	8.63	12.12
Rivers & Harbors, 1922-33	Fixed Effects	-0.13		-0.27	*	-0.03		0.12		Y	Y	1.66	3.14
Rivers & Harbors, 1934-40	Fixed Effects	0.30		-0.07		-0.05		0.36	*	Y	Y	3.4	6.67
Bureau of Reclamation, 1922-33	Fixed Effects	-0.56	*	-0.40		-0.19	*	-0.48		Y	Y	1.48	11.23
Bureau of Reclamation, 1934-40	Fixed Effects	-1.60	*	0.88	*	-0.09	*	0.16	*	Y	Y	6.28	27.61
Public Works Admin. 1934-40	Fixed Effects	-0.08		-0.17		0.16	*	-0.10		Y	Y	3.05	4.79
AAA, 1934-40	Fixed Effects	0.23	*	-0.14		-0.06	*	0.13	*	Y	Y	13.99	17.39
Loans Fixed Effects Results													
Farm Loans, 1922-1933	Fixed Effects	0.13	*	0.24		-0.04	*	0.26		Y	Y	8.06	14.66
Farm Loans, 1934-40	Fixed Effects	0.34	*	0.14		-0.11	*	0.22	*	Y	Y	36.21	42.69

*Statistically significant at the 10 percent level.

Notes. Each row provides standardized coefficients from a separate regression with the four correlates listed at the head of the columns. Standardized coefficients are the number of standard deviations by which the dependent variable changes when there is a one standard deviation increase in the correlate. Means and standard deviations of the correlates are in Table 6.

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APPENDIX A
CONSTRUCTION OF DATA FOR FEDERAL FUNDS IN THE 1920S

The Path of Federal Spending in the States through 1932

Prior to the New Deal there were relatively few federal programs that distributed grants and loans to the states, local governments, or individuals within states. By the early 1920s the grants came in the form of federal highway grants to the states through the Department of Agriculture, public health grants for children under the Shephard-Townsend legislation; grants for state and city soldier and sailors homes; education grants to state agricultural and mechanical universities, for books for the blind, marine schools, and vocational education; grants under the Department of Agriculture to Experiment Stations and Extension Services. The Army Corps of Engineers was building, improving, and maintaining rivers and harbors and flood control works. The Veterans' Bureau was paying out pension and death payments to veterans or their dependents. There were also payments to replace lost property taxes to counties in Oregon associated with the Coos Bay wagon trail and to the state of Oregon for the loss of property taxes on land that the federal government had taken back over from the original Oregon and California Railroad land grant. Finally, there were payments to Oklahoma for gas and oil royalties. The Shephard-Townsend grants for child public health wound down after 1930.

The Bureau of Reclamation was providing no interest loans for building dams and irrigation works and Boulder Dam had begun construction. In the paper we treated these as grant expenditures because the payments on the loans were often delayed for long periods of time and in a number of cases were forgiven.

The loans came in the form of Federal Land Bank mortgage loans to farmers and a series of special appropriations for emergency crop and feed loans. After 1926 loans were available to veterans based on collateral in the form of World War I Adjusted Service Certificates (ASCs) that would mature after 20 years from the date of receipt of the ASC.

Between the fiscal years 1929 and 1933 Congress and the Hoover Administration raised federal government outlays by 52 percent in nominal terms and 88 percent after adjusting for inflation. Mostly this came in the form of expansions of existing programs. In February 1932 the Reconstruction Finance Corporation was established and made a broad range of loans to financial institutions, industry, and lower levels of government. Franklin Roosevelt and the Democratic Congress took office in early March, 1933 and introduced the broad range of programs seen in Table 1 of the paper. The Public Roads Administration took over the highway grants formerly distributed by the USDA and the Federal Credit Administration

Veterans' Bonus.

The World War I Veterans' Bonus that was associated with the Bonus Army March of 1931 and the cash payout in 1936 was based on an insurance certificate that would mature in the mid 1940s. Through 1936 World War I veterans could obtain loans against the certificates, which they did quite actively. In 1936 over Roosevelt's veto Congress passed a law that allowed cash payments on the certificates and thus a very large cash payout.

On May 19th, 1924, Congress enacted a law providing for adjusted service compensation for veterans of World War I. The act provided for a basic service credit of $1 per day served and a $1.25 for each day served overseas with a maximum credit of $625 for overseas service and $500 for home service. For veterans with credits less than $50 the payments would be made in cash. Otherwise, the veteran would receive an insurance certificate of the amount multiplied by 1.25 that would pay out the amount on the certificate at the end of 20 years. Apparently, the 25 percent increase was added to take into account the delayed nature of the payment. If the beneficiary died before 20 years, his beneficiary would receive the amount on the certificate (Veterans Bureau, 1924, p. 688).   In the original act, the veteran could borrow from banks or trust companies using the certificate as collateral an amount up to 90 percent of the present value of the certificate at the end of the year in which the loan was made using a discount rate of 4 percent and adjusting for likely mortality. This turned out to be about 40 percent of the value of a certificate maturing in 20 years. If the veteran failed to pay interest and the face value, the bank could receive payment from the Veterans' Bureau to cover the loan, and the certificate was passed to the Veterans' Bureau (Director of the U.S. Veterans' Bureau, 1924, pp. 688-672; 1932, p. 36). The interest rate on loans was established as 2 percent about the Federal rediscount rate for 60 days' paper in the Federal Reserve District where the loan was made. Many people ignore the life insurance value of the certificates that were issued. The Veteran's Administration suggested in 1932 that in 80 percent of the cases of veterans dying, the insurance payout from the ASC was the only material asset left to the dependents (Administrator of Veterans' Affairs, 1932, p. 36-37).

Between 1925 and 1936 the Veterans' Bureau issued roughly 3.7 million adjusted-service certificates (ASCs) with maturity value of $3.69 billion. About $3.1 billion had been issued in certificates by June 30, 1926, while the rest trickled in over time as the deadline for application was consistently extended.

On March 3, 1927, Congress authorized the Veterans' Bureau to loan directly on the ASCs. By 1928, as seen in Table A-1, the Bureau nearly 700,000 veterans borrowed against their ascs. By 1930 the Veterans' Bureau had made about 2.4 million loans with a value of $215 million against the ASCs.

On Feb. 27, 1931 Congress passed Public No. 743 over Hoover's veto. It provided that the loan basis of the asc shall at no time be less than 50 percent of the face value of the asc after the certificate has been in effect for 2 years. The law also capped the maximum interest rate at 4.5 percent. The new law led to an explosion of new loans as the cumulative dollar value of loans on certificates rose from $215 million to nearly $1.1 billion (Administrator of Veterans' Affairs, 1931, pp. 10, 42-43). The loans had a nice feature that the veteran could forgo repayment and just allow the repayment plus accumulated interest to be taken out of the payment made when the certificate matured. The Veterans' Bureau estimated this would lead to a payout of about $188 for a a typical certificate (the average was roughly $1,000) on which 50 percent had been borrowed and no principal and interest repaid. Of course, the veteran received the intial $500 up front. A law of July 21, 1932 eliminated the two-year waiting period between issuance of the certificate and the loan and cut the maximum interest rate to 3.5 percent (Administrator of Veterans' Affairs (1932, pp. 10, 36-38). After the burst in 1931, the value of loans on the certificates rose by roughly $300-350 million in fiscal 1932 and 1933, declined some during as the recovery began and rose again until 1935.

Table A-1
Loans on World War I Adjusted-Service Certicates through June 30 of Fiscal Year

Fiscal Year Ending June 30	Cumulative Number of Loans on Certificates	Cumulative Dollar Value of Loans on Certificates	Change in Number of Loans on Certificates	Change in Value of Loans on Certificates	Cone's Estimate of Loans in Personal Income included in Personal Income
1927	689,805	64,433,625	689,805	64,433,625	
1928	757,706	73,884,775	67,901	9,451,150	
1929	1,429,946	133,653,488	672,240	59,768,713	
1930	2,357,697	215,435,144	927,751	81,781,656	
1931	2,265,345	1,087,195,525	-92,352	871,760,381	795,000,000
1932	2,584,582	1,396,042,679	319,237	308,847,154	181,000,000
1933	2,836,922	1,750,000,000	252,340	353,957,321	181,000,000
1934	2,884,504	1,614,220,289	47,582	-135,779,711	34,000,000
1935	2,904,525	1,679,669,884	20,021	65,449,595	24,000,000

Sources: Director of Veterans' Bureau. 1927, p. 44; 1928, 26-27; 1929, pp. 5, 30; 1930, pp. 30. Administrator of Veterans' Affairs, 1931, pp. 10, ; 1932, pp. 11, 36-68; 1933, pp. 24-25; 1934, pp. 28-29; 1935, pp. 22-23. Cone, 1940, p. 44.

Frederick Cone (1940, 44) provided monthly estimates of loans on ASCs that he included as part of his estimates of personal income. Table A-1 lists the fiscal year totals of loans from 1931 through 1935. His amounts differ from the ones in the veterans' bureau reports, as he has no loans listed in fiscal year 1930. When the transition is made to grants and the loans paid off in 1936, his totals don't match the veterans' bureau totals. We used Cone's estimates for the ASCs to subtract out the ASCs from the personal income measures to obtain production income numbers. His calendar year totals after paying off loans in millions for 1936 are 1,427, for 1937 are $120, for 1938 are $58, and for 1939 are $34. He does not report a value for 1940. In measuring grants and loans, we used the information from the Administrator of Veterans' Affairs Reports.

We have been unable to find descriptions of the amount of the loans on ASCS or the value of the veterans' bonus on the ASCs in 1936 through 1941 by state for each year. However, there are several sources for specific years that give good descriptions of the share of World War I veterans in the states in several years. The 1926 report of the Veterans' Bureau Administrator reported the distribution of the ASCs across states distributed to that time, but no reports were made after that. By June 30, 1926 approximately 84 percent of the certificates had been issued. The 1930 Census reported the number of World War I veterans, and we used the Integrated Public Use Microdata Sample for 1930 to get an estimate of the number of World War I veterans in each state. We also have information on the number of living World War I veterans receiving pensions in 1934 through 1941 Director of Veterans' Bureau, 1926, pp. 312-313; Administrator of Veterans' Affairs, 1934, pp. 78-79; 1935, pp. 80-81; 1936, pp. 90-91; 1937; pp. 80-81; 1938, pp. 93-94 ; 1939, pp. 93-94; 1940, pp. 101-102; 1941, pp. 89-90. The correlations between the 1934 through 1941 numbers were all above .99. The correlations between the 1926 numbers and these numbers were in the 0.93 to 0.94 range, the correlations between the 1930 number and the 1934-1941 numbers were in the .92 range, which might be expected if people were moving around the country. We calculated the share of veterans in each state (taking into account veterans living elsewhere and in Washington, D.C in the total) in each year where we had information. For the years 1927 through 1929 and 1931 through 1933 we used straight-line interpolations of the shares between the values in 1926 , 1930, and 1934. We then multiplied the values by the national totals to get loan values for the ASCs in each state in 1927 through 1935 and by the cash payouts in 1936 through 1941.

In response to pressure from veterans' groups, Congress overrode a Roosevelt veto on January 27, 1936 to create a new payment structure for the ASCs. The World War I veterans could turn in the ASCs for payment of the face value in cash (the famed Veterans' Bonus) after their outstanding loans and accumulated interest to that date had been deducted. The veteran could also choose a bond dated June 15, 1936 to mature June 15, 1945 with interest at the rate of 3 percent per annum but no interest to be paid on any bond redeemed before June 15, 1937. As of June 30, 1936, during the life of the program, the veterans' bureau had issued a total 3,757,259 ASCs with a maturity value of $3.692 billion. Of these 231,109 had matured on account of death and $229.5 million had been awarded to the designated beneficiaries. This left 3.52 million certificates in force with maturity values of $3.462 billion. Payments of less than $50 had been made in 165,184 cases to the value of $5.206 million. Cash settlements were made to the beneficiaries of 135,615 veterans who died in service for an amount of $44.669 million. After the passage of the 1936 act, the VA received 3.264 million applications for settlements of which 98.9 percent had been certified and the rest were in the process. The face value of the certificates was $3.206 billion. After deducting outstanding liens for loans the net value was $1.764 billion.

In constructing the data, we used the change in the cumulative value of the Veterans' Bureau's loans on the ASCs as the value of loans in each fiscal year through the end of fiscal year 1935. Hardly anybody held on to their loans after the passage of the cash opportunity in 1936. The issue arises as to how to treat the cash out of the veterans' bureau. We treated the full $3.206 billion in cash and bond payouts in fiscal year 1936 as a grant, while the value of loans was treated as a repayment with a value of minus $1,679,699,884 for that year. Additional cash disbursements were made of $282.6 million in fiscal 1937, $13.8 million in 1938, $7.4

million in 1939, \$9.2 million in 1940, and \$2.657 million in 1941 (Administrator of Veterans' Affairs 1941, p. 87.

Veterans' Bureau Spending

The Office of Government Reports reported Veterans' Administration expenditures aside from loans to living veterans on the World War I Adjusted Service Certificates prior to 1936 and the Veterans' Bonus payouts on the ASCs in 1936 and after for the years 1933 through 1939 by state. The expenditures included pension payouts for Navy and Army veterans, VA homes, Maintenance, military and naval insurance payouts for adjusted service certificates of less than \$50 in cash and payments to dependents from ASCs where the veteran has died, We found that these matched the information reported by the Administrator of Veterans' Affairs in Annual Reports for 1934, pp. 78-83; 1935, pp. 80-85; 1936, pp. 90-95; 1937; pp. 80-85; 1938, pp. 93-98 ; 1939, pp. 93-98). We therefore used information from the 1940 and 1941 Reports to add the data for those years (1940, pp. 101-106; 1941, pp. 89-94). The distributions across states in each year were pretty stable with pair-wise correlations between one year and the next of .98 or higher throughout the period from 1933 through 1941.

For the period 1928 through 1932 the Veterans' Administration reported national expenditures for the period prior to 1933 but did not report the total spending by state. For the years 1932 and 1931, the veterans' administration reports the number of pensioners on the rolls and the value of the pensions to be paid by state. This does not represent all of the types of funds for the VA grants used in the data set from 1933 to 1939. We also have the number of veterans reported by state in the Census in 1930 from the Integrated Public Use Microdata Sample (IPUMS). The correlations across states between these measures and the 1933 veterans' bureau spending were .952 between the 1933 distribution and the IPUMS distribution for 1930 and .94 between the share of pensioners in 1932 and 1931 with the veterans' Bureau payments in 1933. In the measure we used in the analysis we used the shares of the national totals from the IPUMS data in 1930 and the shares for the VA spending in 1933 and developed estimates of the shares in 1932, 1931, 1929, and 1928 using straight-line interpolations. We then multiplied the national totals after subtracting out spending that is covered in other categories (spending on state and territorial homes, vocational training, government life insurance, seamen's insurance, allotments and allowances, loans to vets for transportation, medical and hospital services, and miscellaneous factors). The national totals were \$546,255,828 in 1932, \$695,951676 in 1931, \$626,485,964 in 1932, \$620,504,069 in 1929, and \$611,396,308 in 1928 (calculated from Veterans Administrator, 1934, p. 76, Table 40) We made the adjustments to the national totals after comparing totals for 1934 with the OGR reports.

Rivers, Harbors, and Flood Control

The Office of Government Reports offered estimates of spending on rivers and harbors and flood control by the Army Corps of Engineers for the fiscal years 1933 through 1939. To push these estimates back to 1921 and forward to 1941 we examined the reports of the Chief of Engineers, U.S. Army, *Annual Report of the Chief of Engineers* for the years 1920 through 1941. The reports listed the net expenditures by project from the Chief of Engineers budgets as well as separate estimates of net spending from budgets provided under the National Industrial Recovery Act through the Public Works Administration and from budgets provided by the Federal Emergency Relief Acts. We found that a number of the state expenditures did not match up well for 1933; therefore, we also created an alternative estimate for the rivers and harbors spending based on the annual reports. Some projects were associated with multiple states, like the various subdistricts of the Mississippi River and subdistricts of the Ohio River. In the cases where we could identify specific locations within the subdistricts we used the amounts spent in those locations to divide the spending between states. In situations where specific information was not available we divided the expenditures based on rough estimates of the mileage of the rivers measured with maps and rulers. In most of the districts the spending was not divided by project for the following types of spending: preliminary examinations and reports, plant allotments, preliminary examinations and reports for flood control and plant allotments for flood control. For the first two we distributed the spending on those categories across states based on the spending in the district on the projects in the states in that year. For the third and fourth categories we distributed the spending based on the state distribution of flood control projects. The expenditures we use are net expenditures after net receipts from sales are subtracted. We treated negative values as zeroes in this situation on the grounds that when the area had negative net expenditures, they were not pulling money out of the area.

Extending the Grant data back into the 1920s.

A great deal of the state-specific information on distributions to the states for specific programs reported in the Treasury Reports back to 1930 was reported between 1923 and 1930 under the grants and subventions categories in Table 8 and in the notes to Table 8 in the receipts of state governments in Bureau of Census. *Financial Statistics of the States*. Washington, D.C.: Government Printing Office, various years.

We checked the compatibility of the two sources by comparing the total spending and then the totals under specific subcategories from the Financial Statistics of the States (FSS) and the Secretary of the Treasury's Annual Report (TR) for 1930. The grants and subventions in the FSS did not include the payouts for the National Guard to each state reported in the TR. Also in the FSS data, we made sure to subtract grants and subventions from school boards in New York, Ohio, and Indiana and a special industrial accident fund in New Jersey from the FSS totals to get the amounts from the federal government. After making the adjustments, the FSS total had a correlation coefficient across states in 1930 of .929 with the TR total. The average TR/FSS ratio was 0.9999. There were some outliers. The TR/FSS ratio greater than 1.1 at 1.65 in Oregon, 1.48 in South Carolina, 1.30 in Mississippi, and 1.19 in Massachusetts, and less than 0.9 in North

Carolina at 0.39, 0.48 in Georgia,0.69 in Ohio, 0.73 in Maryland, 0.79 in Louisiana, 0.84 in Arkansas, 0.87 in Alabama 's was 1.65, Georgia's was 0.486, Ohio .

At the subcategory level, the correlations between the FSS and TR estimates for grants for soldiers and sailors homes was 0.998691. In 20 states there was a perfect match because there were no payments. In the remaining states the average TR/FSS ratio was 0.97.

The correlation between the TR and FSS estimates of federal highway grants for 1930 is 0.912602. The average TR/FSS ratio was 0.97 with outliers of 1.87 in Mississippi, 2.04 in South Carolina, 0.25 in North Carolina, 0.55 in Ohio and 0.3 in Georgia.

The total education fund grants reported in the FSS are compared with the TR's total payments to colleges for agriculture and mechanic arts, payments for schooling under mineral leases, state marine schools, books for the blind, vocational education, and national forest funds payments to school funds in Arizona and New Mexico. See U.S. Secretary of the Treasury, *Annual Report,* 1930, pp. 437-446, 617-624. The correlation between the FSS estimate and the TR estimate of total education spending is 0.97 and the average TR/FSS ratio is 0.985 with a range of .75 in Wyoming to 1.21 in Pennsylvania.

Agriculture spending for 1930 in the FSS matches up pretty closely with the total of spending on agricultural experiment stations and agricultural extension work from the TS, except for an odd outlier for Oklahoma. The Oklahoma FSS estimate is $921,919, compared with a TR estimate of 298,827. We checked Oklahoma spending in the TS after 1931 and in the FSS before 1930 and the spending amounts were all less than $300,000. We looked throughout the entire Secretary of the Treasury 1930 *Annual Report* for 1930 in depth and saw no mention of a special grant of anything remotely this size. The 1930 (pp. 435-454) report was particularly good at describing in depth the appropriations and rules for distributing grants We also looked at all references to Oklahoma in the 1930 U.S. Department of Agriculture, *Yearbook of Agriculture* and found no mention of a special grant there. We believe that the 921,919 figure in the FSS is a typo that likely should have been 291,919, which would have been consistent with the spending in other years and other sources. When we use the adjusted figure for Oklahoma the correlation between the TR and FSS data for 1930 is .98, the average TR/FSS ratio is 0.977 with a high of 1.158 and a low of 0.739. We use the TR data for the 1930 information and the FSS reports for 1929 and earlier.

The total education fund grants reported in the FSS matches up well with the total from payments to colleges for agriculture and mechanic arts, payments for schooling under mineral leases, state marine schools, books for the blind, vocational education, colleges national forest funds payments to school funds in Arizona and New Mexico. See U.S. Secretary of the Treasury 1930, pp. 437-446, 617-624. The correlation between the FSS estimate and the TR estimate of total education spending is 0.97 and the average ratio of the FSS to TR estimates is 1.018 for the states with a range of .82 to 1.33.

The FSS misses payments that were made to Oregon counties under the Coos Bay wagon road fund grant and the Oregon and California railroad land grant funds. The payments from the two types of funds are basically payments to replace property taxes that counties lost when the federal government took back lands originally granted to the railroads and timber companies in these areas. The combination of the grants totalled $1,023.001 in 1930, $366,414.8 in 1929, $1,130,073 in 1928, and zero in 1927. See U.S. Secretary of the Treasury (1930, 422-423, 617-622) and Draffan 2010 and Sinnot 1926. The FSS also misses payments to the state of Oklahoma from royalties, oil and gas, south half of the Red River. These were $303,005 in 1927, $38,876 in 1928, $68,876 in 1929, and $41,778 in 1930. See U.S. Secretary of the Treasury (1930, 422-423, 617-622),

Most states were on the same July1 t-1 to June 30 t fiscal year as the National Government. For states that were not, we adjusted the spending to the July to June fiscal year basis in the following ways. Massachusetts and Rhode Island were on a Dec 1, t-1 to November 30, t schedule. We therefore calculated the July to June fiscal year *t* value as 7/12 of the state's *t* amount and 5/12 of the states *t-1* amount. Indiana, Maryland, Alabama, Mississippi, Idaho, Wyoming, and Oregon were on an October 1, t-1 to Sept, 30, t fiscal year. We therefore calculated the July to June fiscal year *t* value as 9/12 of the state's *t* amount and 3/12 of the states *t-1* amount. Missouri, Georgia, Louisiana, and Nevada were on a calendar year fiscal year. We therefore calculated the July to June fiscal year *t* value as half of the state's *t* amount and half of the states *t-1* amount. Texas was on a Sept 1, t-1 to August 31, t fiscal year. We therefore calculated the July to June fiscal year *t* value as 10/12 of the state's *t* amount and 2/12 of the states *t-1* amount. Pennsvlvania was on a June 1, t-1 to May 31, t fiscal year and Washington was on a April 1, t-1 to March 31, t schedule. This would have required us to use information on spending from year t+1. Since we wanted to avoid using future information from year *t+1*, we just used the reported value for their fiscal years as the amounts.

National Guard spending.

Spending for the national guard in each state was not available prior to 1930, but the number of officers and enlisted men in each state was reported in the Statistical Abstract of the United States. Using information on national guard spending and the number of officers and enlisted men in each state from 1930 and 1931 we calculated the state's share of the national total in each category. We then estimated a regression of the state's share of national spending as a function of the state's share of officer and the state's share of enlisted men without a constant term. The regression with 96 observations led to the following results:

$$\text{Spending share}(s,t) = \underset{(10.0)}{0.971436} \text{ *officer share } (s, t) + \underset{(0.39)}{0.036299} \text{ *enlisted men share } (s,t)$$

R-squared=.9952.

For the years 1923 through 1929, we then used the regression to predict the spending share for each state and year. We then multiplied that predicted share by an adjusted total spending by the federal government for each year. The information on total spending was reported in U.S. Secretary of the Treasury (1930, pp. 617-622). We need to adjust the total downward because the national total in the report included administrative expenses that did not go to the states and expenditures on territories. The total spending distributed to the states in 1930 on p. 625 was 95.8 percent of the national total including administrative costs reported on p. 622; therefore we multiplied the national totals with administrative costs by .958 to get the national figure used in the prediction. We tried some other methods where we just divided the national total spending by the national number of enlisted men and multiplied by the enlisted men in each state. We also tried this with officers and with the sum of officers and enlisted men. Predictions for all of these methods were correlated for the period 1923-1930 across states at between .97 and .9998. We chose the method we used because it took into account that officers were full-time and enlisted men part-time.

Agricultural Loans through Federal Land Banks 1917 through 1932, Emergency Crop Loans, 1921-1932 and Farm Credit Administration (Federal Land Banks, Land Bank Commissioner, Production Credit Associations, and Emergency Crop and Feed Loans) from 1933 forward.

Federal Land Bank Mortgage Loans through 1932. In 1917 12 Federal Land Banks were organized and authorized to "extend long-term mortgage credit to farmers on security of first mortgages on farm lands." The loans could be made for a period from 5 to 40 years. The loans almost entirely were made through national farm loan association, corporations charted under the 1917 act and organized by farmers on a cooperative basis. The membership of the cooperatives was made up exclusively of borrowers from the Federal land banks. The banks were organized on a cooperative bases because nearly all of the stock was owned by the borrower-owned national farm loan associations. Each bank was liable for its own bond issues and the bond issues of the 11 other Federal land banks. As of 1930 the Federal Land Banks held about 12 percent of the farm mortgage indebtedness in the U.S. The administration oversight of these banks was taken over by the Farm Credit Administration in 1933 (Federal Farm Loan Board1930, pp. 2, 12). We collected information on the number of loans closed in each year from the Federal Farm Loan Board *Annual Reports* for the years 1927, p. 71; 1928, p. 122; 1929, pp. 162, 163; 1930, pp. 121, 124, 1931, p. 124, 1932, p. 106-7. The reports reported the amounts loaned through December 31, of the year of the report back through 1929. Prior to 1928 only the cumulative totals were reported. In checking the data we discovered some discrepancies in 1929 between the value of loans reported for that calendar year and the value determined by subtracting the 1928 cumulative total from the 1929 cumulative total. Most were less than 5 percent but Georgia and Florida had sizeable discrepancies. We used the 1929 calendar year reported values. (Fdldbk.xls). In the analysis we converted the calendar year data to a fiscal year basis for year *t* by taking half of the calendar amount in year *t* and half of the calendar year amount in year *t-1*.

Emergency Crop and Feed Loans through 1932. Congress made funds available for emergency crop production and seed loans in several different years between 1921-1932 under special appropriations. We also had precise information on the distribution across states of the funds in 1922 (U.S. Department of Agriculture. *Agriculture Yearbook*, 1922, p. 51; 1923, p. 120) and in 1924 (U.S. Department of Agriculture 1924, p. 91). We had information on the states that received the emergency loans in 1921, 1929, and 1930. Using the information from the total distribution of loans over the period 1921 through 1930 (Farm Credit Administration 1933, pp. 115-117), we could do a reasonable job of figuring out the distribution of loans across states within those years (see fca3337.xls and fca3841.xls). There were loans in 1921 of $1,935,125 and in 1922 of 1,481,988. An Act of March 3, 1921 allowed for $1,954,929 in seed-grain loans to Montana, North Dakota, Idaho, and Washington. An Act of March 20, 1922 authorized lending of $1,481,988 seed-grain loans in crop-failure areas for the crop of 1922. The loans were for $24,685 in Idaho, $756,213 in Montana, $661,548 in North Dakota, $37,812 in South Dakota, and $1,730 in Washington (Agriculture Yearbook, 1922, p. 51; 1923, p. 120). USDA financial statements from 1924 report appropriations of $1 million for seed and farm loans to farmers in New Mexico (Yearbook of Agriculture, 1924, p. 91). The total loans reported for 1921-1930 to New Mexico in FCA, 1933, pp. 115-117 were $433,849, so we believe that was the amount spent in 1924. The USDA financial statement in 1926 included $22,560 in seed grain loans (Yearbook of Agriculture,1926, p. 121). At some point between 1921 and 1930 there was another distribution of loans in the range of $1.6 million, but we have not found the description of that loan distribution. It likely occurred in 1927. In 1929 Congress made available $6 million for the USDA to make emergency loans to farmers for seed, feed, and fertilizer. About $5.5 million was loaned in Virginia, North Carolina, South Carolina, Alabama, Georgia and Florida for staple crops. About $200,000 was loaned in southern Florida on vegetables. By June 30, 1930 about $4.6 million had been repaid. In spring 1930 under the first deficiency act of March 26, 1930, loans were made to other farmers in Virginia, North Carolina, South Carolina, Alabama, Georgia and Florida and crop financing was aided in Indiana, Illinois, Missouri, Oklahoma, New Mexico, Minnesota, North Dakota and Montana. Except in the Southeastern states and in North Dakota and Montana, however, the amounts loaned were negligible. The total spring loans amounted to $4,612,136. In August and September roughly $500,000 was loaned in Florida on winter vegetables and another $170,000 was loaned on fall pasture crops in Alabama, Missouri, Oklahoma, and Virginia (Yearbook of Agriculture, 1931, pp. 5, 6).

We had precise information on the distribution of the emergency crop and feed loans made during the calendar year for 1931 and 1932 from the annual reports of the Federal Credit Administration (1933, pp. 115-117). The 1932 loans were made from funds provided by the Reconstruction Finance Corporation but were administered by the Federal Farm Bureau of Loans and were reported there and not in the RFC reports. Roughly $120 million was advanced in 1931 and 1932. Although reported on a calendar year basis, nearly all of the loans, with the exception of late loans were made prior to July 1 of each year. In nearly all cases the fiscal year value and the calendar year value were similar. Where they were not, we subtracted the loan values in fall year *t* from the year *t* calendar value and added it to the year *t+1* value.

Other Potential Farm Loans to consider in the 1920s.

Between August 24, 1921 and November 30, 1924, the War Finance corporation made advances totalling $297,934; 58 % to banking and finance institutions; 29 percent to livestock loan companies, and 13 per cent to cooperative marketing associations. This was all for agriculture purposes. Amounts advanced are on map on p. 232 of Yearbook of 1924.

Federal intermediate credit banks were organized in 1923 under the agricultural credits act. They operated in the same cities and territories as the Federal land banks and had the same directors and executive officers. The function of the banks was to provide agricultural credit for periods that were intermediate between short-term commercial bank notes and long-term farm mortgage loans. They discounted agricultural loan paper for banks and agricultural credit corporations, livestock loan companies, and made loans to cooperative marketing associations secured by warehouse receipts or shipping documents for staple agricultural commodities (Federal Farm Loan Board, Report, 1930, pp. 44-45; 1932, pp. 32-34). The potential subscribed capital for the Federal intermediate credit banks was $5 milllion for each bank. In 1923 $2 million was originally subscribed for each bank at the time of organization. In 1926 the Columbia, SC bank called in an additional million due to improper conduct by offers of the credit corporation for which the Columbia bank had discounted a large volume of notes (1927 report, p. 18) In 1928 the Berkeley bank called for an additional $2 million paid in September 1928 (1928 report, p. 41). The Columbia, SC bank called in another $2 million in 1929 and the Berkeley, CA bank added $1 million (1929, p. 81; Farm Credit Administration 1935, 55-56) Thus, of a total of $30 million paid in prior to 1932, $5 million was paid to the Columbia SC bank and $5 million was paid in to the Berkeley CA bank; $2 milllion was paid in for each of the other 10 banks. During 1932, paid-in capital rose by $1 million for Spokane and for Houston. The capital distribution stayed constant through 1934. In 1936 the paid-in surplus of the St. Paul Bank was decreased by $1.75 million and Columbia, SC increased its capital by $1 million and Wichita raised its by $750,000 (Farm Credit Administration 1936-1937, p. 48; 1938, p. 46 ; 1939, p. 58). In 1940, the $40 million in paid-in capital was repaid. The Federal Intermediate Credit banks had accumulated out of earnings an aggregate surplus of $83,579,188 for the system on Dec. 31, 1940, so they did not anticipate need to use the revolving fund.

In the 1934 FCA Report (p. 49), it states that the Federal Farm Mortgage Corporation Act authorized the Governor of the FCA to increase capital stock when needed. $40 million was authorized and the FCA subscribed and had paid in the full $40 million.

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APPENDIX B
COEFFICIENTS AND T-STATISTICS FOR PANEL DATA ANALYSIS
Appendix Table 1: OLS and Fixed Effects Estimates for Panel Analysis of Per Capita Relief Grants in 1967$, 1934-1940

	Fiscal Years 1934-1940	
	OLS	Fixed Effects
Per Capita Personal Income in 1967$	0.01	-0.01
	2.83	-0.94
Standard Deviation of Percent Democratic Votes for President, 1896 to Most Recent Election	1.86	3.32
	9.68	1.88
Governor is a Democrat	-2.48	-1.97
	-0.97	-0.81
Governor and Majority in Both State Houses are Democrats	1.96	1.98
	0.89	0.72
State Fixed Effects	No	Yes
Year Fixed Effects	No	Yes

Notes. t-statistics are listed below coefficient.

Appendix Table 2

OLS and Fixed Effects Estimates for Panel Analysis of Per Capita Highway Grants and Per Capita Public Works Administration (PWA) Grants for Panel Data, 1922-1933 and 1934-1940

	Per Capita Highway Grants in 1967$				Per Capita PWA Grants in 1967$	
	Fiscal Years 1922-1933		Fiscal Years 1934-1940		Fiscal Years 1934-1940	
	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects
Per Capita Personal	-0.0005	-0.0031	0.0003	-0.0276	0.001	-0.001
Income in 1967$	-0.59	-1.48	0.16	-6.24	0.87	-0.26
Standard Deviation of	0.55	-0.62	1.24	2.27	0.16	-0.19
Percent Democratic Votes for President, 1896 to Most Recent Election	8.23	-3.09	7.44	3.01	2.18	-0.32
Governor is a Democrat	0.69	-0.02	-2.42	-1.16	0.57	1.91
	0.87	-0.04	-1.10	-1.12	0.61	2.33
Governor and Majority		-0.56	3.15	-0.75	0.05	-0.96
in Both State Houses are Democrats	-0.46	-0.55	1.66	-0.64	0.06	-1.04
State Fixed Effects	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes

Notes. t-statistics are listed below coefficient.

Appendix Table 3: OLS and Fixed Effects Estimates for Analysis of Per Capita Rivers and Harbors Grants and Bureau of Reclamation Loans for Panel Data, 1922-1933 and 1934-1940

	Per Capita Rivers and Harbors Grants in 1967$				Per Capita Reclamation Bureau Loans in 1967$			
	Fiscal Years 1922-1933		Fiscal Years 1934-1940		Fiscal Years 1922-1933		Fiscal Years 1934-1940	
Per Capita Rivers and Harbors Grants in 1967$	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects
Per Capita Personal Income in 1967$	0.001	-0.001	0.001	0.005	0.001	-0.016	0.013	-0.109
	1.52	-0.68	0.95	1.06	0.88	-3.00	2.90	-7.39
Standard Deviation of Percent Democratic Votes for President, 1896 to Most Recent Election	-0.18	-0.18	-0.03	-0.11	0.57	-0.96	2.23	5.83
	-5.32	-2.11	-0.30	-0.13	5.06	-1.85	5.68	2.32
Governor is a Democrat	-0.50	-0.17	1.34	-0.81	-1.96	-4.35	-7.83	-6.06
	-1.27	-0.62	1.04	-0.69	-1.49	-2.80	-1.50	-1.74
Governor and Majority in Both State Houses are Democrats	0.99	0.08	0.45	4.76	2.59	-1.16	15.06	8.98
	2.03	0.19	0.41	3.59	1.56	-0.44	3.36	2.29
State Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes

Notes. t-statistics are listed below coefficient.

Appendix Table 4: OLS and Fixed Effects Estimates for Analysis of Panel Data for Per Capita Farm Loans 1922-1933 and 1934-1940 and Per Capita AAA Grants, 1934-1940

	Per Capita Farm Loans in 1967$				Per Capita AAA Grants in 1967$	
	Fiscal Years 1922-1933		Fiscal Years 1934-1940		Fiscal Years 1934-1940	
Per Capita Farm Loans in 1967$	OLS	Fixed Effects	OLS	Fixed Effects	OLS	Fixed Effects
Per Capita Personal Income in 1967$	-0.004	0.005	-0.022	0.036	-0.02	0.01
	-8.60	3.55	-5.50	1.83	-9.80	1.88
Standard Deviation of Percent Democratic Votes for President, 1896 to Most Recent Election	0.30	0.11	3.85	4.74	1.46	-0.59
	8.50	0.75	11.06	1.42	8.17	-0.49
Governor is a Democrat	-0.66	-1.14	-5.67	-11.71	-1.81	-2.70
	-1.60	-2.82	-1.23	-2.53	-0.76	-1.61
Governor and Majority in Both State Houses are Democrats	-0.98	0.83	-0.29	18.78	-3.23	4.41
	-1.82	0.94	-0.07	3.61	-1.58	2.34
State Fixed Effects	No	Yes	No	Yes	No	Yes
Year Fixed Effects	No	Yes	No	Yes	No	Yes

Notes. t-statistics are listed below coefficient.