NBER WORKING PAPER SERIES

A PATCHWORK SAFETY NET: A SURVEY OF CLIOMETRIC STUDIES OF INCOME MAINTENANCE PROGRAMS IN THE UNITED STATES IN THE FIRST HALF OF THE TWENTIETH CENTURY

Price V. Fishback
Samuel Allen
Jonathan Fox
Brendan Livingston

Working Paper 15696
http://www.nber.org/papers/w15696

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
January 2010

The authors would like to thank Shawn Kantor, Peter Lindert, Carolyn Moehling, Robert Margo, Paul Rhode, David Ribar, Adrian Stoian, and John Wallis for sharing data and their insights on the issues addressed in this paper. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

A Patchwork Safety Net: A Survey of Cliometric Studies of Income Maintenance Programs in the United States in the First Half of the Twentieth Century
Price V. Fishback, Samuel Allen, Jonathan Fox, and Brendan Livingston
NBER Working Paper No. 15696
January 2010
JEL No. H53,H75,N32,N42,R50

ABSTRACT

Social welfare programs in the United States are designed to serve as safety nets for people in hard times, in contrast with the universal approach found in many other developed western nations. In a survey of Cliometric studies of social welfare programs in the U.S., we examine the variation in the safety net in the U.S. across states in the 20th century, the determinants of the variation, and its impact on socioeconomic outcomes. The U.S. has always displayed substantial variation in the extent of the safety net because the features of most public social welfare programs are and were determined by local and state governments, even after the federal government became involved. Differences across states persist strongly for typically a decade, although the persistence weakens with time, and there are some periods when federal intervention led to a re-ordering. The rankings of state benefits differs from program to program, and economic and political factors have different weights in determining benefit levels in panel data estimation of their effects. Variation in benefits across programs during the early 1900s had significant impact on labor markets, economic activity, family formation, death rates, and crime.

Price V. Fishback
Department of Economics
University of Arizona
Tucson, AZ 85721
and NBER
pfishback@eller.arizona.edu

Samuel Allen
Virginia Military Institute
341 Scott Shipp Hall
Lexington, VA 24450
allensk@vmi.edu

Jonathan Fox
University of Arizona
jonathanffox@gmail.com

Brendan Livingston
University of Arizona
bsl@email.arizona.edu

A Patchwork of Programs: A Survey of Cliometric Studies of Income Maintenance Programs in the United States in the First Half of the Twentieth Century

Price Fishback, Sam Allen, Jonathan Fox, and Brendan Livingston

The United States has always had a much larger safety net than most people realize. In the current era the United States is considered a laggard among the world's developed economies in terms of social welfare expenditures. Part of this image is driven by the fact that many developed nations have adopted a strategy of universal programs where all receive health care and family support payments. Meanwhile, the U.S. follows a safety net strategy, in which private purchases of insurance and private charities play a much larger role and people typically do not receive payments until their income drops below specified levels. As a result, gross government expenditures on social welfare in the U.S. circa 2000 are much smaller as a share of GDP than in Sweden, Norway, Finland, and Denmark. Once adjustments for taxation of benefits and purchases and unfunded mandates are taken into account, however, the gap narrows considerably. In 1990 purchasing power dollars, net government expenditures by the U.S. in 2003 were $5,408 per capita, which is lower than Sweden's per capita spending of $6,259 and Norway's $5901, about the same as Denmark's 5,472, and higher than Finland's $4,232. Once private social welfare expenditures are included, the U.S. per capita net public and private social welfare spending rises to $7,850, which is substantially higher than Sweden's $6,715, Norway's $6,315, Denmark's $5,818, and Finland's $4,920.[1]

One reason that the extent of the U.S. social safety net is under-estimated is that it is composed of a large patchwork system of programs. Anybody reading the House of

[1] Fishback (2009) put together these comparisons from OECD statistics. For comparisons of many countries over long periods of time see Lindert (2004, vols 1 and 2).

Representative's Ways and Means Committee's *Green Book*, a massive volume providing an overview of social welfare programs, will by struck by the broad range of programs available for the poor in the United States. Another reason that the volume is so large is that the benefits in a number of programs often vary substantially across states. The responsibility for income maintenance programs has been centered in local and state governments since colonial times. Until the New Deal during the Great Depression of the 1930s, the federal government provided disability aid and pensions only to families of veterans of the military and its own employees on the grounds that problems related to unemployment and injury were local affairs.[2] Franklin Roosevelt's administration argued for the expansion of federal involvement during the New Deal by claiming that the Great Depression was a nationwide problem that needed to be dealt with by a national government.

We seek to make sense of the broad array of social welfare programs at all levels of government across the United States and over time by surveying the cliometric literature on the history of poverty and social insurance programs during the early twentieth century. Cliometrics applies economic and statistical analysis to the study of history, represented by the muse Clio, and thus is particularly well suited to the measurement of the extent of the programs in the economy. In the course of the paper, we discuss the shifts in responsibility for public social welfare programs between the local, state, and federal governments and the difficulties these shifts present for collecting data that fully describe the patchwork system of programs in the U.S. over time. The benefits offered in the programs varied a great deal across the United States in the early twentieth century and we explore the degree to which the relative rankings of benefits across the states remained stable over the course of the twentieth century. After summarizing the

[2] See Moss, Skocpol, Costa, Fishback and Thomasson (2006, volume 2).

existing studies that examine the determinants of benefits across locations prior to 1940, we offer some preliminary analysis of the political and economic determinants of benefits from 1940 through 2000. Finally, we survey a group of studies that have examined the impact of poverty and social insurance programs on socio-economic outcomes.

The Development of the Patchwork System and the Challenges Created for Data Collection

The local and state focus of social welfare spending has played havoc with the collection of quantitative evidence on income maintenance during the eighteenth, nineteenth, and early twentieth centuries in the United States. Joan Hannon and Stephen Ziliak (2006), who are among the few cliometricians who have performed quantitative analysis of U.S. poverty programs during that period, searched high and low to put together time series and cross-sections on welfare spending prior to 1929 for the *Millennial Edition of the Historical Statistics of the United States*. They could only find long time series for a handful of large cities and eastern seaboard states, state level cross sections of pauper support from the 1850, 1860, and 1870 censuses, and information of the number of paupers in almshouses from the 1880, 1890, 1904, 1910, and 1923 censuses of almshouses. The cross-sectional census comparisons are problematic in different ways. The state totals from 1850 through 1870 do not match well with data for New York, where detailed evidence by county is available (Kiesling and Margo 1997). Meanwhile, the almshouses from 1880 to 1923 account for only part of the income maintenance programs, missing the people living in their own homes who received "outdoor" relief.

The public spending numbers also miss the resources provided by private charities, which were extensive. In the 1870s and 1880s, for example, leaders of the Charitable Organization Societies (COS) orchestrated the abolition of public outdoor relief programs in major cities in an

attempt to improve the efficiency of the provision of relief, as well as provide more moral guidance for the poor to aid to achieve the self-reliance that would move them out of poverty. The move led to a large increase in private charitable donations, and the poor shifted from public to private relief rolls, but the change had relatively little impact on efficiency. In comparisons to earlier periods, the poor stayed on the rolls roughly the same length of time, the same share (33 to 40 percent) left the rolls for higher earnings, very few if any achieved higher occupations under COS management, and the ratios of expenditures per person on indoor and outdoor relief to the earnings of common labor share have stayed remarkably constant nationwide at around 25 to 30 percent for most of U.S. history.[3] Even as local and state governments regained more control of relief around the turn of the century, private charitable donations still played a large role. Recent research by Brendan Livingston (2009) on private and public funding of relief from 1900 to 1930 shows that private charities were prevalent and provided a wide breath of services. Private charitable payments for income maintenance were roughly about double the payments made from public funds in Massachusetts between 1900 and 1930. Local spending was also double state spending, with a majority of spending going towards outdoor relief.[4]

As the U.S. entered the Progressive Era of the late nineteenth and earlier twentieth century, state governments began playing an increasing role in income maintenance programs for the poor and disabled. In the 1910s a large number of states adopted workers' compensation and mothers' pension programs, as seen in Table 1. Workers' compensation provided payments to the families of workers injured or killed in all accidents arising out of or in the course of

[3] See Ziliak and Hannon 2006, 2-698-9, Ziliak (1996a, 2002b, Lebergott, 1976, 61-65)

[4] Livingston's (2009) statements are based on data reported by Massachusetts State Board of Charity from 1900 through 1919 and the Massachusetts Department of Public Welfare for the years 1920 through 1930.

employment. Mothers' pensions in most states provided benefits to widows with children. By 1919 about one-third of the states explicitly provided benefits for mothers with children who were divorced or separated from their husband, two explicitly provided benefits for single mothers, and seven more established the law for mothers of dependent children without referring to marital status (Moehling 2007, 120-1). In the late 1920s a handful of states passed laws creating county options to provide need-based old-age assistance to the elderly to allow them to live on their own rather than in almshouses. In the early 1930s the states began raising the stakes and requiring local governments to provide old-age assistance payments and in many cases providing state funding. In the meantime, many states were also providing payments to the blind to allow them to live on their own.

The drastic problems with unemployment led to a series of responses by governments at all levels. Some state and local governments expanded building programs to provide more jobs for workers, but their efforts were limited by declining tax revenues and the sharp rise in the unemployed. In 1933 Franklin Roosevelt described unemployment as a nationwide problem, and the federal government established the first of a series of relief programs designed to provide aid to the unemployed and the destitute. The first major program was the Federal Emergency Relief Administration (FERA), which gave grants to the states to make direct relief payments to families in need and to provide relief with a work requirement for the able-bodied. For four months in the winter of 1933-34, the Civil Works Administration (CWA) hired up to 4 million workers for public projects. Many of the people working on the CWA were shifted to FERA work relief projects in March 1934 when the CWA was phased out. Throughout the New Deal, the Civilian Conservation Corps provided an opportunity for young men aged 16 to 24 from poor families to work on federal conservation projects often located in other states. They worked

roughly 40 hours per week in semi-military troops and were given room and board plus a dollar per day, of which the lion's share was paid to their parents.

Despite the emergency programs in place, estimated national unemployment rates were still over 20 percent in 1935 (the figure is 14.2 percent if people on work relief were considered employed, see Darby 1976, 8). Frances Townsend and others led movements calling for programs to offer payments to the elderly as long as they spent the money quickly. State and local governments were overwhelmed by the combination of declining state revenues and the large numbers of poor seeking aid, and they faced constitutional restrictions on the issuance of debt to run deficits on current spending. Even had they sought to issue debt for public capital investment, they faced high real interest rates and investors who demanded risk premiums due to skepticism about the state's ability to repay the debt.

The Roosevelt administration and Congress negotiated a realignment of the income maintenance programs (Wallis, Fishback, Kantor 2007). The Roosevelt administration gained increased control of the short-run emergency work relief programs for the able-bodied by replacing the FERA programs with the Works Progress Administration (WPA) and some smaller programs, all of which ended in the early 1940s when World War II made them redundant. The federal government returned responsibility for the "unemployable" poor to the state and local governments. Many people today describe the WPA as a jobs program, but the WPA did not create jobs at the time the way other federal agencies did. On the Public Works Administration (PWA), Public Roads Administration (PRA), and Public Buildings Administration (PBA) projects, the government hired contractors who then hired workers full-time at regular pay rates. The WPA, like the FERA before it, was a relief program with a work requirement. They paid enough for basic necessities, but opportunities to work were limited and the average hourly

earnings on these programs were typically half the average hourly earnings on PWA, PBA, and PRA programs. In some southern agricultural areas, however, the WPA hourly earnings were comparable to or even higher than local earnings (Howard, 1941; Neumann, Fishback, and Kantor Forthcoming 2010).

The long-run programs were established in the Social Security Act of 1935. The Old Age Survivors' Insurance (OASI) program, what everybody calls Social Security today, established a national old-age pension plan for workers with taxes collected by the federal government, which then paid out benefits to people who had contributed to the plan. The federal government began collecting the taxes in 1938 and made the first payments to the elderly in 1940. Unemployment Insurance (UI) programs were federal/state programs in which employers paid into reserve funds that paid benefits to unemployed workers. The states had leeway to set their own benefits structure and the federal government provided funds for administering the program (Baicker, Goldin, and Katz, 1998). Although the federal government had off-loaded responsibility for direct relief on to state and local governments, it provided matching grants to the states to provide aid to dependent children (ADC), old-age assistance (OAA), and aid to the blind (AB). Over the next few years, some states quickly passed enabling legislation that established their own benefit levels and met the basic federal administrative guidelines, while others delayed several years (see Table 1). Nearly all states had passed the enabling legislation for Unemployment Insurance by 1937. The payments of unemployment benefits were delayed until 1938 and 1939 (see Table 1) because each state had to build up a reserve fund for two years before the unemployed could receive benefits.

Unlike most developed countries, the U.S. has resisted the creation of a universal health insurance plan. In the late 1910s a number of states considered adopting sickness insurance laws

that would offer state run programs to provide partial wage replacement for workers when they were ill. Such funds had been established in many European countries and were associated with lower adult and infant mortality rates.[5] The state run programs would have replaced many of the private funds operated by fraternal societies, unions, and employers during the period. John Murray (2007) finds that the support among the general public for the funds was relatively weak, as many people with sickness insurance were satisfied with their coverage, and some without coverage thought the taxes would be too high for the benefits received. The reform-minded American Association of Labor Legislation was not as effective at bringing together the coalition that contributed to the passage of workers' compensation laws. Employers who had supported workers' compensation because they feared increasing accident payments under negligence liability were not as concerned with sickness insurance because there were no legal doctrines requiring them to pay benefits for illness. Unions and employers with sickness funds did not push hard for the law because it would have reduced their competitive advantage in attracting workers. Meanwhile, the American Medical Association actively opposed the legislation in most states.[6]

The absence of sickness insurance did not prevent state and local governments from contributing public funds for hospitals and hospital care. The per capita government cost payments by state and city governments for specific cities in Figure 1 range from $2 to $46 year 1990 dollars with a mean of $10.79 in 1923 and from $2 to 62 in 1930 with a mean of $13.87. In addition, almshouses often provided some degree of medical care to the poor (Stoian and Fishback forthcoming). During the Great Depression the Farm Security Administration (FSA)

[5] See Murray and Winegarten (1998) and Bowlbis (forthcoming)
[6] See Murray (2007) and Thomasson (2002).

provided care from doctors and nurses in many underserved agricultural areas (Grey 1999). Under the auspices of the 1950 amendments to the Social Security Act, the ADC, OAA, and AB programs began making direct payments to medical providers who treated recipients. State and local governments continued providing medical services to the people receiving general assistance payments. These programs were eventually phased out after the introduction of Medicare for the elderly and Medicaid for the poor in the mid-1960s (Fishback and Thomasson 2006, 2-795).

Geographic Variation and Its Persistence Over Time

In the patchwork of American programs the variation in benefits varies dramatically across geographic locations, just as they did in the per capita hospital government cost payments in Figure 1. The variation is present both before and after the federal government became heavily involved in social welfare spending in the 1930s. The per capita city and government cost payments on poverty and unemployment relief in 1923 in Figure 2 varies from lows of less than $1 in 1990 dollars in several southern cities to a high near $29 for several Massachusetts cities and a mean of $6.26. By 1930, the spending in Figure 2 had increased in response to the first full year of the Great Depression to a higher average of $10.76 and the range between the low southern cities and the high Massachusetts cities had broadened such that benefits ranged between $0.71 to $56.43. The figure shows that this rise occurred in nearly every city, because all of the points are clustered in the upper left portion of the diagram.

Over the course of the 1920s there was a clear sense of persistence in per capita government cost payments, as shown by the strong positive relationship between 1923 and 1930 spending in Figure 2. The spending per capita across cities around 1930 was influenced not only

by the prior spending per capita in 1923 but also changes in employment. Table 2 shows regressions run on the natural log of per capita city government spending on care of the poor and veterans in 1930 as a function of the same measure as of 1923 and the change in the natural log of state manufacturing employment between 1923 and 1929 (or 1931). The coefficients can be read as elasticities. The strong path dependence is still there after controlling for changes in employment. Cities with per capita relief spending one percent higher in 1923, holding other things constant, tended to have per capita spending in 1929 and in 1931 that was 0.93 and 0.94 percent higher, respectively. Per capita welfare spending responded strongly to offset drops in the natural log of employment. The negative elasticity implies that a one percent reduction in the change in the log of employment led to an increase in per capita relief spending of 1.48 percent in 1929 and 2.52 percent in 1931.

Unemployment rates reached nearly 25 percent in 1933, when Franklin Roosevelt took office and started the New Deal relief programs. Federal government involvement led to sizeable shifts in the per capita spending for relief of the poor and the unemployed. Figure 3 documents the dramatic rise in relief spending from all government and private sources between 1931 and 1939 as every point lies well above and to the left of a 45 degree diagonal line from the origins. The rise in spending is not necessarily due to a rise in unemployment. These years were chosen because the national unemployment rates in the two years were similar at 16.3 percent in 1931 and 14.8 percent (including work relief workers as unemployed) in 1940. The federal government did not become heavily involved in relief efforts until 1933; therefore, the changes wrought by the federal government involvement in relief become more obvious in comparing these two years. Boston, Massachusetts and Rochester, New York led the rankings in 1931 at over $82 per head (1990$). By 1939 the median expenditure per capita was $221 in 1990

dollars and spending in Brocton, Massachusetts was leading the country at over $400 (1990$) per capita on relief.

The introduction of federal spending in the 1930s had two effects on the geographic distribution of resources. The first was a reduction in the dispersion across cities. The coefficient of variation (the standard deviation divided by the mean) for the 115 cities fell from 0.95 in 1931 before federal involvement to 0.4 by 1939. Second, the persistence in the geographic rankings across the decade was much weaker across the 1930s than across the 1920s. The raw correlation is 0.58 in Figure 3 for the 1931/1939 comparison, compared with 0.89 in Figure 2 for the 1923/1930 comparison. The relationship between 1931 and 1939 per capita spending levels is even weaker after we control for the state of the economy in the cities in 1931 and 1939. The elasticity from the regression in Table 3 shows that a city with one percent higher relief spending per capita in 1931 on average had relief spending per capita that was only 0.17 percent higher in 1939. Meanwhile, the per capita spending was strongly influenced by changes in the labor market. The estimated elasticity of -1.11 implies that a one percent reduction in the change in the log of state manufacturing employment was associated with a 1.11 percent increase in per capita relief spending.

The states still retained a great deal of control over benefit levels after the Social Security Act transformed the role of the federal government in social welfare programs. Workers' compensation programs have always been state programs, although federal pressures, discussed below, led to some convergence of benefits in the 1970s. States retained control of basic benefit levels in UI and the categorical assistance programs through a shift that broadened ADC to become Aid to Families with Dependent Children (AFDC) in the 1960s and tightened requirements under Temporary Aid to Needy Families (TANF) in the 1990s. Supplemental

Security Income (SSI) took over control of need-based payments to the elderly and the blind in the 1970s.

The legacy of the Social Security Act's reliance on state decisions about benefits is a relatively large variation across the country in each program to this day. The measure of expected workers' compensation benefits as a percentage of annual income for a worker earning the national average weekly wage in Figures 4a and 4b show a large range spanning from 0.26 to 0.70 in 1940 that expanded to span 0.20 to 0.77 in 1970. The range then narrowed to span 0.36 to 0.84 in 2000. Similarly, the maximum monthly payments under the various incarnations of mothers' pensions, ADC, AFDC, and TANF measured in 1967 dollars had ranges that spanned $66 to $221 for four-person families under ADC in 1940, $48 to $282 for three-person families under AFDC in 1970, and $31 to $179 under TANF in 2000. In discussions of the geographic variation of benefits in these programs we focus on the statutory benefits for workers' compensation and UI and the monthly maximums offered for need-based programs like ADC, OAA, and AB. The need-based programs base the payments on the household's current resources and supplement them up to a monthly maximum. In essence, the monthly maximum can be seen as a target base income that they are trying to reach. The maximum has fallen for ADC and OAA since the 1960s, as the Food Stamp program has eliminated the need to supplement the food budget.

Another legacy of the decision to rely on the states has been a relatively strong persistence of the state rankings of maximum benefits in each program within the same decade over the period from 1970 to 2000. Table 4 shows the cross-state correlations for benefits for different pairs of census years. The second diagonal from top right to lower left, the one below the first diagonal composed entirely of ones, shows the correlations between the end-points of

the same decade. As the diagonal moves downward to the left the span between the years being compared increases.

The second diagonal for UI and the family programs shows relatively weak correlations between 1940 and 1950. The correlations then strengthen over time in comparisons of 1950 to 1960, 1960 to 1970, 1980 to 1990, and 1990 to 2000. This is likely a result of experimentation by the states in setting their benefits. When the states established the original benefits for UI and ADC in the late 1930s, states tend to be clumped into distinct groups that chose the same benefit levels. In Figure 5a there were clusters of states that paid ADC maximums in 1940 of $66, $101, $125, 137, and $185 in 1967 dollars. Clusters for UI weekly maximums in 1940 are found at $36, $38, and $43 in 1967 dollars in Figure 6a. Over time the states refined their choices and there was much less clustering in Figures 5b and 6b. As a result, the correlations between 1940 and 1950 benefits across states was only 0.1069 for UI and 0.34 for AFDC. The correlations for 1950 and 1960 rose to 0.42 for UI and 0.76 for ADC. By the latter part of the twentieth century the correlations for UI reached as high as 0.8037 for 1990 and 2000 and 0.93 for the same years for ADC. Workers' compensation did not go through the same experimentation process in the 1940s and 1950s because most laws were passed in the 1910s. Thus, the correlations between 1940 and 1950 were near or above 0.7 in all comparisons except 1970 and 1980.

It is worth noting that the relative rankings are not set in stone for the long run. As the time span increases, comparisons of the correlations as you read down the same column show that the correlations weaken significantly. Thus the correlations for workers' compensation benefits fall from 0.92 for 1930 and 1940 to 0.78 for 1930 and 1950 to 0.68 for 1930 and 1960, to 0.58 for 1930 and 1970, and below 0.3 for 1930 and later years.

Differences in the target groups of the income maintenance programs lead to relatively weak correlations between UI and ADC and between workers' compensation and ADC in Table 5. UI and workers' compensation target people who are typically employed, while ADC and SSI tend to target people without employment or at the very low end of the employment scale. The correlations between workers' compensation and UI within the same year in 1940 and 1950 were nearly zero before they strengthened to rise above 0.4 after 1970. Correlations between workers' compensation and ADC within the same year rise to peak around 0.55 in 1960 and then weaken a great deal through 2000. The correlations between UI and ADC within the same year are weak in 1940 and 1950, they peak at 0.56 in 1960 and then fall to 0.36 by 2000. The correlations within the same year of SSI with workers' compensation and UI in 1990 and 2000 are also relatively weak. The strongest correlations are found between the need-based programs of ADC and SSI in 1990 and 2000.

The Political Economy of the Variation in Benefits

Both mothers' pensions and workers' compensation were adopted in the majority of the states in a relatively short period of time during the heyday of the Progressive Era in the 1910s. Efforts to aid the "worthy" poor who were struck by misfortune through no fault of their own drew backing from a diverse set of interest groups, ranging from major business and civic leaders to reform groups. Despite the broad-based support for the basic concepts, there was extensive debate about the specific features of the laws. The debate surrounding the benefit levels was particularly contentious.

In preliminary cross-sectional analyses of the factors determining the generosity of mothers' pensions in 1919, 1929, and 1940, Carolyn Moehling (2006) found that states where

women's clubs endorsed mothers' pension legislation earlier tended to choose less generous pensions. The negative relationship indicates the conflicts in the objectives of pension advocates. The early leaders of the mothers' pension movement wanted to provide relief to the "deserving" poor, but they feared the creation of a permanent pauper class, a common fear throughout the progressive era. They did not want to raise benefits high enough to encourage desertion or divorce by spouses. Nor did they want to attract migration to the state to take advantage of higher benefits. The generosity of benefits was also lower in states with more blacks and higher in areas where women were a larger share of the labor force.

Even though significant numbers of employers, workers, and insurers anticipated gains from workers' compensation legislation, there were still intense debates over benefits and other features of the law.[7] In some cases, as in Missouri, the political maneuvering led to delays in adoption of the law. Fishback and Kantor (1998, 2000) performed an analysis of a panel of workers' compensation benefits between 1911 and 1930 to try to examine the factors influencing the levels of benefits chosen. They found that prior to 1930, employers in high risk industries generally succeeded in keeping benefits low. On the other hand, states with more unionized manufacturing industries served as a countervailing force to push benefits higher. Once officials

[7] Fishback and Kantor (2000) showed that the political economy of the original adoption of workers' compensation was the result of groups of employers and insurance companies joining with groups of reformers and workers to pass the laws. The employers anticipated a reduction in uncertainty about their accident liability payments associated with the negligence laws and changing court decisions. Employers also ending up passing along a significant portion of the costs of the new workers' compensation benefits through compensating wage reductions for nonunion workers. Despite the wage offsets, many non-union workers still benefited from the new law because they were better insured against accident risk. They typically received payments for nearly all accidents and the average payouts overall tended to be higher than negligence liability. The insurance companies also benefited from selling a great deal more workers' compensation insurance than they had sold previously of the combined package of employers' liability insurance and worker's accident insurance, although they benefited less when the state created a competitive insurer or lost out in the seven states that created a monopoly state insurer. The issue of state-provided insurance raised the hackles of insurers and those fearful of government replacement of general business. Fishback and Kantor (2000) found state insurance schemes were adopted in the states where unions and progressive reformers had more strength.

were in place to administer workers' compensation laws they also pressed for higher workers' compensation benefits. Finally, states in which the legislature shifted parties in both houses also tended to raise workers' compensation benefits as part of their new reforms when they took office.

In the original debates over workers' compensation, reformers and workers' advocates often accepted compromises on the initial benefits in hopes of putting some law in place and then seeking to raise the benefits in the future. Benefit levels therefore have continued to be a source of contention to the present day. A key determinant of the actual benefit levels paid is the weekly maximum benefit payment, which was originally set as a specific amount in nominal dollars. The law might state that the worker was eligible to receive as much as two-thirds of their normal weekly earnings, but a low maximum weekly payment could cut that percentage sharply. In fact, Allen's (2004, 2009) analysis of benefits and wages shows that the weekly maximum was binding for more than 90 percent of workers in various dangerous jobs across several census years.

As wages rose with inflation, a very common experience throughout the century, legislatures had to adjust the weekly maximums for benefits to keep pace with nominal wage increases. The legislatures, many which met only every two years, often raised the weekly maximums after inflation eroded the benefits as a share of income. This led to the annual fluctuations in the national average expected benefit as a percentage of annual manufacturing wages, holding accident rates constant seen in Figure 7. The national average disguises much larger fluctuations within the states. The legislative delays also meant that workers' compensation benefits as a share of manufacturing earnings stayed below its 1930s level until the early 1970s. As can be seen in the plots of workers' compensation benefits as a share of annual

income in 1940 and 1970 in Figure 4a, the bulk of the states rest at points below a 45 degree line, which shows that most state legislatures allowed inflation to erode expected benefits in ways that caused the benefits relative to wage to be lower in 1970 than they were in 1940.

Samuel Allen (2009) shows that there was a substantial change in the situation in the 1970s. The federal government sponsored a National Commission on Workers' Compensation Laws in 1972 to assess the adequacy of state-mandated benefits. The National Commission called for several major reforms in state workers' compensation laws, including a large increase in benefit levels. Further, it added teeth to these recommendations by recommending that the federal government take control of workers' compensation if the states did not adopt substantial reforms. Indeed, a congressional bill was proposed that would have reopened the claims procedure in states with "inadequate" benefits and required payment of the benefit shortfall in those cases.

One of the Commission's key recommendations was that the states move away from their practice of setting nominal maximum levels for weekly benefits every few years to indexing the benefits to change with changes in the weekly wage rates in the states. Prior to 1972, only a handful of states had begun indexing their benefits. After the National Commission report, the vast majority of states made the shift. As a result, the expected benefits as a share of annual earnings, holding accident rates constant, rises sharply in the 1970s and then displays a slightly rising trend thereafter. This is seen in Figure 7. Similarly, the plots of expected benefits in each state in 1970 and 2000 show that the workers' compensation benefits area all clustered in the upper left of Figure 4b. Allen performed a hazard analysis of the timing of the shift and found that states tended to adopt the indexing earlier if they already had high benefits, and had state senates that were dominated by Democrats. Southern states were slower to adopt the procedure.

In contrast to the Fishback and Kantor studies prior to 1930, neither union representation nor the administrative structure of workers' compensation appeared to matter much.

The shift in procedure for benefit adjustments also led to a sharp change in the impact of various factors to the level of benefits. Allen set up a panel data set with annual information for the states for each year from 1940 through 2000 on the real level of benefits as a function of interest group activity, and political measures with interaction terms that allowed estimation of the change in the effect of the measures after 1972. The analysis controls for year and state fixed effects and the structure of industries. Prior to 1972, the level of real wages had a weak positive relationship with the level of real expected benefits. After the commission report, the relationship strengthened a great deal; the elasticity implied that a one percent rise in real wages was associated with a 0.565 percent rise in real benefit levels. In the pre-1972 period, more unionization was associated with higher benefit levels. In the post-commission period the shift to indexing weakened the relationship with annual changes in unionization. In a similar fashion, the effects of Democratic leadership in the state legislature was strong before 1972 and weakened after the Democrats succeeded in pushing for indexing of wages.

A large literature debates the reasons why there was a very large variation in the distribution of all types of New Deal funds, which is surveyed in Fishback, Kantor and Wallis (2003). [8] We will focus here on the specific factors related to the variation in the per capita spending on relief. In a famous Fireside Chat, Roosevelt proclaimed that the New Deal would promote "Relief, Recovery, and Reform." Conservatives, critics and big businessmen charged the New Dealers with the more cynical purpose of using government programs to build

8 See Couch and Shughart (1998), Wallis (1984, 1987, 1988 1998, 2001), Wright (1974), Reading (1973), Anderson and Tollison (1991), Fleck (1994, 1999a, 1999b, 1999c, 2001, 2008); Stromberg (2004), Arrington (1970), Reading (1973), Mason (2003). For discussions of corruption, see Fishback, Kantor and Wallis (2004).

patronage and to "buy" voters to ensure the continuation of the Democrat's hegemony over the federal government. Many modern programs have explicit formulas that determine the distribution of federal spending through matching grants and specific counts. The inner workings of the emergency New Deal programs are more difficult to fathom. Explicit formulas for matching funds written into the FERA legislation were largely deemed unworkable after the first three months. Senate testimony from FERA administrators on the distribution of funds offers a long list of factors that were considered but little guidance on the weights each factor was given. Similarly, the WPA matching requirements were routinely ignored and the shares of funds provided by state and local governments varied widely.

Nearly all of the statistical analysis of the distribution of relief spending and emergency jobs have estimated regressions using cross-sections of counties, cities, or states. All find that the relief programs distributed funds to areas with at least one or more of the following: higher unemployment earlier in the 1930s, more of a decline in income, and lower long-term incomes. They also find, however, that there is evidence of political maneuvering in a variety of sophisticated forms.[9] Various studies have shown that more monies were distributed in areas with higher voter turnout, more swing voting, and loyal voters (Fleck 1999c, 2001a; Fishback, Kantor, and Wallis 2003; Wright 1974; Stromberg 2004; Couch and Shughart 1998). Fleck (2001a) fine tuned the analysis to show that loyal voters mattered more in states loyal to the Democrats and swing voters mattered more in states where swing voting was more common. Stromberg (2004) showed that the Roosevelt administration spent more money where there were more radios, which gave them an advantage in gaining credit for the monies. More recently,

[9] See Fleck (1999a, 1999b) shows that greater voter turnout, swing voting, and loyal voters all mattered to the distribution of FERA spending and WPA work relief jobs. Fishback, Kantor, and Wallis (2003)

Neumann, Fishback, and Kantor (2010? forthcoming) have used a panel of monthly evidence to examine the extent to which the Roosevelt administration used the timing of relief spending to influence elections. There was a clear pattern in the raw data showing increased spending near election times, particularly in 1936 and 1938. The WPA defended the timing by arguing that these were periods of high unemployment (Howard 1941). After controlling for changes in employment and nationwide shocks, the panel study finds that there were rises in spending in the months immediately before the November elections and a decline in spending in December.

To supplement the work by Sam Allen on the factors influencing workers' compensation benefits from 1930 through 1940, we have done some preliminary analyses on the relationships between the benefit maximums for the family aid programs and UI and political parties and incomes across states for the years 1940, 1950, 1960, 1970, 1980, 1990 and 2000. The estimating equation takes the following form.

$$B_{st} = \beta_0 + \beta_1 Yst + \beta_2 P_{st} + \Delta + \square + \Delta*time + \varepsilon_{st},$$

where B_{st} is the natural log of the maximum benefit in 1967 dollars in year t and state i. Y_{st} is the natural log of average income in 1967 dollars over the decade (average for 1931 through 1940 for 1940, 1941 through 1950 for 1950, etc.). P_{st} is a vector of averages across the decade of political measures, including the average of the percent voting for the Democratic presidential candidate, the average percent voting for other presidential candidates aside from Democrats and Republicans, the share of years in which the state simultaneously had a Democratic governor and the percent Democrat exceeded the percent Republican in both houses of the state legislature, the previous Democratic state dominance measure interacted with a southern dummy, the share of

years in which the state simultaneously had a Republican governor and the percent Republican exceeded the percent Democrat in both houses of the state legislature, and the share of years in which both legislatures shifted party dominance during the decade. The Δ is a vector of state dummies that control for features of the states that do not vary over time, and is a vector of year dummies to control for nationwide shocks to the political economy. The vector Δ is interacted with a time counter (1900=0) to control for state-specific time trends. The error term ε_{st} captures factors that are not measured in the analysis. Results are shown in Table 6 with and without the state and year fixed effects and the state specific time trends to show how the inferences change when these are not included.

The relationships between benefits and income change sharply as we add more controls to the analysis. When the state and year fixed effects and the state-specific time trends are not included, there is a strong positive relationship between personal income in the state and the maximum UI weekly benefit. The statistically significant coefficient implies that a one percent rise in state per capita income is associated with a 0.336 percent rise in the maximum UI benefit. Once state effects are included to control for long-term features of the state and nationwide changes associated with the years, the effect becomes statistically insignificant and slightly negative, and the effect gets smaller still when the state-specific time trends are added. Meanwhile, the relationship between ADC Benefits and average personal income is negative in the absence of the state and year fixed effects and trends. Once we control for all three, the relationship changes markedly and becomes positive and statistically significant, so that richer states are more generous to the poor. A one percent rise in state per capita personal income is associated with a family maximum benefit that is 0.448 percent higher. In the case of the

dependent children benefits, it is particularly important to add the year fixed effects to control for changes in the definition of the measure being used.

The effect of political parties tends to show strongly without the extra controls. Both types of benefits tended to be higher in states that tended to vote for Democrats for president and when there were more shifts in party dominance in the state legislature in the prior decade. In addition, the dependent children benefits were lower in states that voted for someone besides major party candidates in presidential elections and in southern states where Democrats dominated all parts of state government. The benefits were higher in areas where Republicans succeeded in capturing control of all aspects of state government. However, these effects are much weaker and statistically insignificant as we add the state and year fixed effects and then the state-specific time trends.

There is some debate among social scientists about the use of state and year fixed effects and state-specific time trends. Some claim that the extra controls are correlated with components of the remaining variables in the analysis. For example, if a state is fundamentally Democratic, the coefficient of the state fixed effect may also be picking up the role of Democrats in the state. Thus the coefficient of the Democratic variable when the state fixed effect is included is just capturing deviations from the long term fundamental Democratic nature of the state. On the other hand, there may be other time-invariant factors that are not measured in the model being estimated that influence the benefit levels and happen to be correlated with the Democrats. If so, the coefficient of the Democrat variable in an equation that eliminates the fixed effects and time trends is going to be biased in ways that will cause mis-measurement of the relationship.

We can get a sense of which states are most generous after controlling for income and political party by examining the coefficients of the fixed effects. For unemployment insurance

benefits, the states in the top ten include Connecticut, Minnesota, Pennsylvania, New York, New Jersey, Wisconsin, Massachusetts, Colorado, Delaware and Kansas. The states in the bottom ten include Mississippi, Indiana, Alabama, South Dakota, Arizona, South Carolina, Florida, Missouri, Tennessee, and Georgia. For dependent child benefits the top ten include Connecticut, New Hampshire, Wisconsin, California, New York, Minnesota, Vermont, Massachusetts, Utah, and Washington and the bottom ten are Mississippi, Alabama, South Carolina, Arkansas, Tennessee, Texas, Louisiana, Georgia, Florida, and Kentucky.

The Impact of Public Income Maintenance Programs on Socio-Economic Outcomes Before 1950

There is a growing cliometric literature on the impact of social insurance and poverty programs on various measures of socio-economic welfare in the U.S. between 1900 and 1950. The stated primary goal of each program was to provide resources to people who have experienced either a drop in income or are permanently stuck in a low income situation. It seems obvious that receiving poverty and social insurance payments would make the person better off in the short run. Absent fraudulent activity, the recipient's income is higher during a period where their income is low. Some of the policy analyses therefore focus on how the programs influenced non-income measures for a class of people, such as mortality rates, family formation, crime rates, and other factors. Others show how the programs influence the incentives for other decision makers in the rest of the economy. For example, an increase in public spending on poverty relief might lead to reductions in private charitable giving or might lead to downward adjustments in wages in the labor market because potential recipients are better protected by the

public policy against bad times. Such changes, whether unintended or recognized in advance by policy makers, tend to offset the benefits of the public program to the recipients of the benefits.

The studies summarized in Table 8 tend to follow a similar set of procedures. The policies all varied across state and sometimes counties, so researchers have collected information on key features of the policies for each location. In most cases the researchers have put together panel data sets in which there is both variation across locations in any one year and variation across time within locations in the outcome measure and the policy measure. The number of years in the panels ranges from 2 years to more than 10 years. Most of the studies use state or county averages in a particular year as the unit of observation. Given that the policies typically varied by state and time, use of averages for the outcome variables may not lead to severe aggregation bias. A small number of studies have access to information on individuals, but they do not have information on the same individual for more than one year and so the cross-sections are pooled into "pseudo-panels."

All the studies seek to identify the impact of the policy on the outcome in multi-variate analysis that includes other factors that influence the outcome. Over the past twenty years, economic historians have paid increasing attention to elimination of "endogeneity bias," which might arise when the policy measure is correlated with the error term in the regression equation to be estimated. This type of bias can occur if key variables that are correlated with both the outcome and the policy are not included in the analysis. This "omitted variable bias" in the coefficient is a multiplicative function of the correlation between the left-out variable and the outcome variable and the correlation between the left-out variable and the policy measure. Endogeneity bias might also arise if there is a feedback relationship such that the outcome variable itself influences the decision makers when they design the policy measure. For

example, in a study of the impact of a program on average incomes, there are likely to be situations where decreases in average incomes lead to adoption of a more generous poverty policy. This feedback will cause the estimates of the impact of the poverty program to be less positive than the true causal relationship between the program and income.

To deal with the omitted variable problem, all of the studies adopt some form of the following estimating equation. In this case the estimation is performed on a panel with each observation as an average from state *s* in year *t*.

$$O_{st} = \beta_0 + \beta_1 POLICY_{st} + \beta_2 X_{st} + \Delta + \square + \Delta * time + \varepsilon_{st},$$

where O_{st} is the outcome measure in year *t* and state *s*, $POLICY_{st}$ is a measure of the policy, and X_{st} is a vector of a set of factors that vary across states and time that influence the outcome measure. To control for factors in each state that do not vary across time within a state but do vary across states, a vector Δ of state fixed effects is included. Such factors might include the fundamental legal environment, the climate, and other factors. A vector $\square$ of year effects can be included to control for factors that hit all states in the same year but vary across years, such as wars, monetary policy, and the introduction of new nationwide knowledge. Another vector of state-specific time trends ($\Delta * time$) can be used to control for trends within each state that vary across states. The error term (ε_{st}) is the sum of all of the unmeasured factors.

The coefficient β_1 is an estimate of the relationship between a change in policy and a change in the outcome. In statistics, there is no way to ascribe true causation to this estimate of the relationship because statistics can only get at correlation. If the $POLICY_{st}$ measure is not

correlated with the error ε_{st}, then β_1 is often considered an unbiased measure of the relationship. Economists also use the term "causal" in this situation.

In seeking to control for omitted variable bias, some of the earlier studies only included the vector X_{st} of variables that varied across time and place. Worries that there are many factors that have gone unmeasured has led economists to increasingly use the state and year fixed effects and state-specific time trends to reduce the potential problems with omitted variable bias. These extra controls have the advantage of controlling for all sorts of factors that had gone unmeasured, but that were correlated with both the outcome and policy variables. On the other hand, researchers do not necessarily know which factors are being controlled by the fixed effects and some researchers are worried that the fixed effects and state time trends are picking up some aspects of the policy and causing the β_1 estimate to understate the policy effects.

To some extent, the fixed effects and state time trends control for the feedback form of endogeneity. Researchers have also explored using instrumental variable (IV) analysis in which they seek a variable that is correlated to a reasonable degree with the policy measure but is uncorrelated with the error term ε_{st}. It should be emphasized that this is composed of the unobservables after controlling for all of the other factors in the equation. Nearly all of the studies that use the IV approach use a Two-Stage Least Squares (2SLS) approach in which a first-stage equation of the following form is estimated.

$$POLICY_{st} = \alpha_0 + \alpha_1 Instrument_{st} + \alpha_2 X_{st} + \Delta_1 + \square_1 + \Delta_1 * time + u_{st},$$

Note that the equation includes all of the factors in the right hand side of the earlier equation along with the instrumental variable. Then a prediction of the Policy variable is substituted in the final stage outcome equation.

$$O_{st} = \gamma_0 + \gamma_1 Predicted\ POLICY_{st} + \gamma_2 X_{st} + \Delta_2 + \square_2 + \Delta_2 * time + \varepsilon_{st},$$

This technique is designed to capture the impact of the portion of the actual policy measure that is correlated with the instrument, and thus not correlated with the error term in the final equation. There are potentially a number of instruments that might be used and there is no guarantee that the results will always be the same for each instrument.

Most of the studies in Table 7 show comparisons of the results with estimates of the raw relationship between the policy and the outcome in the absence of any controls, as well as estimates with the various controls included. In many cases, the inclusion of the controls reduces the absolute value of the coefficient, suggesting that omitted variable bias is a problem when just looking at raw correlations or graphs of the relationship between the outcome and policy variable. In a number of cases, but not all, the use of IV estimation leads to stronger relationships between the policy measure and the outcome that was disguised in the coefficient estimates performed without instrumental variables.

The studies of workers' compensation, the first of the major social insurance programs summarized in Table 7, show that the switch to workers' compensation laws served to raise the average amounts of post-accident compensation received by workers when they were injured. The changes in liability rules and in the size of benefits were associated with reductions in non-union hourly earnings in dangerous industries like coal mining and lumber. Unionized workers

were more effective at staving off these reductions and thus gained more from the legislation. The initial introduction of social insurance, however, did not always influence wages. When unemployment insurance programs began paying benefits in the late 1930s, there is no sign that hourly earnings adjusted downward (Balkan, 1998).

The impact of workers' compensation on accident rates was more complex and largely determined by the relative costs of preventing accidents for workers and employers. Since workers' compensation insurance premiums were experience-rated, higher post-accident benefits gave employers more incentive to prevent accidents while allowing workers to be less careful. Panel data studies by several scholars show that workers' compensation laws were associated with higher accident rates in coal mining, where the costs to employers of preventing accidents were high enough that they chose to pay higher premiums rather than incur the very high costs of doing more to prevent accidents in each miner's workplace deep in the mine. In manufacturing, where employers had much more control over the conditions in the workplace, some studies show a reduction in accident rates when workers' compensation was introduced.

When mothers' pensions were introduced in many states, the opponents feared that the provision of benefits to female-headed households might lead to higher divorce or separation rates. The compromise solution in a number of the states was to limit payments to widowed mothers. Carolyn Moehling has assessed the impact of mothers' pension and ADC laws on family formation using individual level data from the Census during several years. Her results suggest that divorce rates and separation rates were higher in states with more generous mothers' pension programs by 1920. She does not find the same kinds of effects for the years 1940, 1950, and 1960 after the Social Security Act established the federal matching programs for the state ADC programs that replaced mothers' pensions in the late 1930s. She does find a relatively

strong positive relationship between family break-ups and ADC benefits for white women in 1970.

The original state old-age assistance laws declared that one goal was to provide enough benefits to the elderly to live on their own. Dora Costa (1999) has found that higher benefits under the federal matching grant version of old-age assistance established under the Social Security framework after 1935 allowed more women to live on their own. Work by Leora Friedberg (1999) and Donald Parsons (1991) shows that OAA allowed a significant number of elderly to stay out of the labor force.

OAA did not have as many salutary effects on the mortality rates of the elderly. Even though raw correlations suggest that the introduction of OAA was associated with lower death rates among the elderly between 1930 and 1938, Stoian and Fishback (forthcoming 2010) find that death rates fell as much or more in the same states for other age groups not eligible for OAA. They suggest that OAA had little effect on death rates in the 1930s because it largely was substituting for benefits through almshouses and other programs that the elderly were receiving under the general poverty programs. Andreea Balan Cohen finds that OAA is associated with lower death rates in the 1940s and 1950s in part because a broader range of the elderly received benefits. In addition, new technologies like penicillin in the early 1940s meant that relatively small increases in benefits in the 1940s and 1950s could be used to purchase much more effective treatments of some mortal illnesses that had not been treatable in the 1930s.

On the other hand, poverty relief programs in the 1920s and 1930s were more successful at reducing death rates among the most vulnerable population in society, infants below the age of one. Jonathan Fox (2009) finds that an additional $780,000 (in 2007$) of spending in cities on poverty relief before the New Deal was associated with the reduction of one infant death. Public

health education programs were even more successful. Death rates for children older than one were not influenced nearly as much by these programs. The federal government began offering very large amounts of relief funds in 1933 that swamped the spending by state and local governments before. Fishback, Haines and Kantor (2007) find that about $2 million (in 2000$) in additional relief spending associated with reduction of one infant death, half a homicide, one suicide, 2.4 deaths from infectious disease, one death from diarrhea in large urban areas between 1929 and 1940. Greater relief spending also gave families enough income to allow them to return to more normal fertility rates.

Relief spending also contributed to reductions in property crime rates. Shawn Kantor, Ryan Johnson and Price Fishback (forthcoming) examine crime rates in 81 cities during the 1930s. They find that work relief poverty programs, like the WPA, served to reduce property crime rates. A ten percent increase in spending on work relief was associated with a 1.5 percent reduction in property crime. In most specifications the effect of relief payments without a work requirement was smaller in part because people on direct relief were not having their hours soaked up by a work requirement during the day. Relief spending was not as successful as private employment in reducing property crime. The estimates suggest that a one percent decline in employment in a city was associated with a one percent rise in property crime rates in the 1930s. The employment results are similar to findings in a study of the U.S. between 1979 and 1997 published by Steven Raphael and Rudolf Winter-Ebmer in the *Journal of Law and Economics* in 2001.

The federal government's spending on emergency relief programs like the FERA and the WPA during the 1930s led to complaints by some employers that they created disincentives for workers to accept private employment, and thus work relief jobs in particular might crowd out

private employment. The debate in the 1930s mirrored the long standing discussions of the issue, which suggested that benefits for the unemployed provided an outside option that raised unemployed workers' reservation wage when seeking private employment. What was unusual in the 1930s was that the unemployment rate was so high, over 20 percent in several years, that there seemed to be plenty of unemployed workers to soak up before crowding out could occur.

A series of labor market studies cited in Table 7 offer conflicting pictures of the impact of relief programs on private employment in the 1930s. Studies of cross-sectional data using IV estimation by Robert Fleck (1999) for county data in 1937 and 1940 and by John Wallis and Daniel Benjamin (1981) using city data in 1934/1935 suggest that areas with higher relief employment did not experience a reduction in private employment.

On the other hand, studies using panel data sets, which allow the research to take advantage of variation both across geographic areas and over time, find some degree of crowding out that varies across time. In the early years of the decade when unemployment was at its peak above 20 percent, Kent Matthews and Daniel Benjamin (1992) find that the addition of one work relief job reduced private employment by about one-third of a job, while Todd Neumann, Price Fishback, and Shawn Kantor (forthcoming 2010) find a slight positive effect of relief spending on private employment. After 1935, when unemployment rates fell below 20 percent, both studies find that an additional work relief job was associated with a reduction of up to nine/tenths of a private job.

The relief jobs may have helped workers in ways that, oddly enough, caused the official measures of unemployment to rise. High unemployment rates often discourage workers from seeking work. These discouraged workers are not considered unemployed under standard definitions of unemployment, which require that someone be actively seeking work to be defined

as unemployed. Meanwhile, during the 1930s relief workers were treated as unemployed in the official statistics. As a result, when a relief job in the 1930s became available and was filled by a discouraged worker, the number of unemployed in the official statistics rose by one. Hence we see the odd effect that the creation of an additional relief job could make the official unemployment statistics look worse during the 1930s.

The impact of public works and relief programs extended well beyond the labor market. An added dollar of public works and relief spending in a U.S. county was associated with an increase in retail sales of roughly 40 cents (Fishback, Horrace, and Kantor 2005). Given typical ratios of retail sales to income, this suggests that incomes in the county grew roughly 85 cents at the mean when a dollar was added to public works and relief spending. Counties with greater public works and relief spending appeared to be more attractive to workers, as these counties experienced more in-migration during the 1930s (Fishback, Horrace, and Kantor, 2006; Sorensen, Fishback, and Kantor 2008).

Summary

Social welfare programs in the United States are designed to serve as safety nets for people who hit hard times, which contrasts with the universal approach found in many other developed western nations. Even though the focus is more on the safety net, modern U.S. public social welfare spending per capita spending rivals the spending in other western countries in comparisons based on purchasing power parity. Include private social welfare spending and the U.S. ranks among the highest in the world in total per capita social welfare spending.

The average for the U.S. disguises enormous variation in the extent of the programs within across states within the United States. This variation arose in part because most public social welfare programs were the responsibility of local and state governments until the New

Deal programs were introduced during the Great Depression. Even after the federal government became involved, many federal programs have left decisions about benefit levels and other features in the hands of the states, after setting some base rules and offering matching grants. Thus, there still remains extensive variation across states over time. For most types of programs, the cross-state correlations of benefit levels at the end-points of a decade are relatively high, although the strength of the correlation weakens as the interval between years compared rises. There were some periods when federal intervention or threats of intervention led to a re-ordering of benefit levels across states, including the New Deal's impact on per capita relief spending during the 1930s and the shifts in workers' compensation benefits seen in the 1970s. The patchwork nature of the safety net is illustrated best by the correlations of benefit levels for different programs in the same year. The correlations are relatively low suggesting that benefit generosity in one program was not tightly matched by generosity in other programs within the same state. Analysis of the economic and political determinants of benefit levels suggests that both economic and political factors influenced the process, although their importance varies from program to program.

All of the programs are designed to provide resources to people in dire straits. It seems obvious that more resources makes the recipient better off in the short run; therefore, most of the cliometric studies of the benefit programs have focused on the indirect and/or unintended consequences of the programs. Wage reductions for nonunion workers were associated with increases in workers' compensation benefits in the early years although not with the introduction of unemployment insurance programs in the late 1930s. The introduction of workers' compensation had varied effects on accident rates that depended strongly on the costs to employers of preventing accidents. Mothers' pension programs contributed to an increase in

separations and divorces when they were first introduced, but the matching-grant Aid to Dependent Children programs that replaced mothers' pensions in the 1930s showed little relationship to breakups until after 1960. Old Age Assistance programs had little impact on elderly death rates in the 1930s, in part because the elderly were being moved off of general welfare rolls. By the 1940s when penicillin was introduced, the programs contributed to reductions in death rates. The programs also allowed more elderly women to live on their own and reduced the labor supply of the elderly in 1940 and 1950. Studies of a range of effects of general relief and work relief programs in the 1920s and 1930s suggest that they contributed to reduced death rates for infants and for specific types of diseases, lowered crime rates, increased economic activity and stimulated in-migration into the counties with more spending.

Table 1
The Presence of State Social Welfare Programs in the United States in the Early 1900s

	Workers Compensation		Mothers' Pension		Old-Age Assistance	Aid to the Blind	Unemployment Insurance
State	**Year Law Permanently Enacted**	**Year Added Some Coverage of Occupational Disease**	**Year Enacted if before 1935 when Federal Act Passed**	**Year Switched to Aid to Dependent Children**	**Year Enacted if before 1935 when Federal Act Passed**	**Making Cash Payments as of August 1, 1935**	**Year of First Payments to Unemployed**
Alabama	1919	1951	1931	1936	----	No	1938
Alaska	1915	1945	1917	1945	1915	No	1939
Arizona	1913	1943	1917	1936	1933	No	1938
Arkansas	1939	1940	1917	1936	----	Yes	1939
California	1911	1915	1913	1936	1929	Yes	1938
Colorado	1915	1945	1912	1936	1927	Yes	1939
Connecticut	1913	1930	1919	1941	----	Yes	1938
Delaware	1917	1937	1917	1936	1931	No	1939
Florida	1935	1945	1919	1938	----	No	1939
Georgia	1920	1945	----	1937	----	No	1939
Hawaii	1915	1930	1919	1937	1933	no	1939
Idaho	1917	1939	1913	1936	1931	yes	1938
Illinois	1911	1930	1911	1941	----	yes	1939
Indiana	1915	1937	1919	1936	1933	yes	1938
Iowa	1913	1947	1913	1943	1934	yes	1938
Kansas	1911	1953	1915	1937	----	yes	1939
Kentucky	1916	1936	1928	1942	1926	yes	1939

Louisiana	1914	1953	1920	1936	----	yes	1938
Maine	1915	1945	1917	1936	1933	yes	1938
Maryland	1912	1939	1916	1936	1927	yes	1938
Massachusetts	1911	1930	1913	1936	1930	no	1938
Michigan	1912	1937	1913	1936	1933	no	1938
Minnesota	1913	1921	1913	1937	1929	yes	1938
Mississippi	1948	1962	1928	1941	----	no	1938
Missouri	1926	1931	1917	1937	----	yes	1939
Montana	1915	1953	1915	1937	1923	no	1939
Nebraska	1913	1935	1913	1936	1933	yes	1939
Nevada	1913	1947	1913	1955	1925	yes	1939
New Hampshire	1911	1947	1913	1936	1931	yes	1938
New Jersey	1911	1929	1913	1936	1931	yes	1939
New Mexico	1917	1945	1931	1936	----	no	1938
New York	1913	1920	1915	1937	1930	yes	1938
North Carolina	1929	1935	1923	1937	----	no	1938
North Dakota	1919	1925	1915	1937	1933	no	1939
Ohio	1911	1929	1913	1936	1933	yes	1939
Oklahoma	1915	1953	1915	1936	----	yes	1938
Oregon	1913	1943	1913	1937	1933	yes	1938
Pennsylvania	1915	1937	1913	1936	1934	yes	1938
Rhode Island	1912	1936	1923	1937	----	no	1938
South Carolina	1935	1949	----	1937	----	no	1938
South Dakota	1917	1947	1913	1940	----	no	1939
Tennessee	1919	1947	1915	1937	----	no	1938

Texas	1913	1947	1917	1941	----	no	1938
Utah	1917	1941	1913	1936	1929	yes	1938
Vermont	1915	1951	1917	1936	----	no	1938
Virginia	1918	1944	1918	1938	----	no	1938
Washington	1911	1937	1913	1936	1933	yes	1939
West Virginia	1913	1935	1915	1936	1931	no	1938
Wisconsin	1911	1929	1913	1936	1925	yes	1936
Wyoming	1915	1966	1915	1936	1929	yes	1939

Sources: See Fishback and Thomasson (2006, 2-709). Workers' Compensation Laws: See Fishback and Kantor (2000) for date of initial enactment. See Balkan (1998, 64) and Allen (2004, 170-1) for the dates in which occupational diseases were covered. The date of initial enactment of the workers' compensation law listed above is the date at which a permanent law was enacted. New York passed a compulsory law in 1910 and an elective law in 1910, but the compulsory law was declared unconstitutional, and the elective law saw little use. New York passed a compulsory law in 1913 after passing a constitutional amendment. The Kentucky law of 1914 was declared unconstitutional and was replaced by a law in 1916. The Missouri General Assembly passed a workers' compensation law in 1919, but it failed to receive enough votes in a referendum in 1920. Another law passed in 1921 was defeated in a referendum in 1922 and an initiative on the ballot was again defeated in 1924. Missouri voters finally approved a workers' compensation law in a 1926 referendum on a 1925 legislative act (see Kantor and Fishback 1994). Maryland (1902) and Montana (1909) passed earlier laws specific to miners that were declared unconstitutional.

Mothers' pension laws: For laws enacted prior to 1920, see Thompson, 1919, pp. 7-11 and for laws enacted after 1920 see Theda Skocpol (1992, p. 457). In the states of Missouri (1911), (California pre1913), Wisconsin (1912), Michigan (1911), and Oklahoma (1908) there were state provisions that provided funds similar to mothers' pensions in indirect ways. Some of the provisions were limited to specific cities and others were indirect means of providing funds to dependent children. Arizona in a 1914 referendum passed a mothers' pension and old-age pension system that hinged on the abolishment of the almshouses in the state, but it was found unconstitutional (Thompson, 1919, pp. 7-9). More detail on the specifics of mothers' pension laws as of 1934 are available in Stevens 1970, pp. 28-29 and Committee on Economic Security 1937, pp. 233-249). Carolyn Moehling provided information on the year in which the state switched to an aid to dependent children program that was eligible for matching grants under the Social Security Act.

Old-Age Pensions: See Stevens, 1970, 20-24 and Committee on Economic Security, 1937, pp. 160-71. Arizona set up an old-age pension subject to the elimination of almshouses in a referendum in 1915, but the pension was declared unconstitutional. Pennsylvania passed an old-age pension law in 1923 that was declared unconstitutional in 1924. Nevada also passed an act in 1923 that was replaced by the 1925 act listed above. Information contained there also offers more detailed descriptions of the laws.

Aid to the Blind: See "Public Provision for Pensions for the Blind in 1934," Monthly Labor Review 41 (3) (September 1935), pp. 584-601; reprinted in Stevens, 1970, 29-31.

Year of First Payment of Unemployment Insurance Benefits to the Unemployed: Balkan (1998, 75).

Table 2

Elasticities from Regressions of the Natural Log of Per Capita Relief Spending in City (1967$) in Year t on the Natural Log of Per Capita Relief Spending in 1923 and Change in Log State Manufacturing Employment from 1923 to Year t.
(t-statistics below each coefficient)

	ln(per capita poor relief) fsc	
	1929	1931
Natural Log of Per Capita Poor Relief in City in 1923	0.9306	0.948
	22.98	*16.62*
Change in Natural log of state manufacturing employment from 1923 to year	-1.482	-2.52
	-2.31	*-2.53*
Constant	0.2644	0.3705
	4.5	*1.16*
R-squared	0.817	0.68
Number of Observations	167	147

Sources: Manufacturing employment from U.S. Bureau of Census (Manufacturing Censuses), 1929 and 1931; city per capita poor relief from U.S. Bureau of the Census *Financial Statistics of Cities* (1925c, 1932).

Table 3
Elasticities from Regressions of the Natural Log of Per Capita Relief Spending in City (1990$) in 1939 on the Natural Log of Per Capita Relief Spending in 1931 and Change in Log State Manufacturing Employment from 1931 to 1939.

	Elasticity
	t-statistic
Per Capita Public Relief in 1931 in 1990$	0.17
	6.14
Change in Natural Log of State Manufacturing Employment, 1939-1931	-1.11
	-4.60
Constant	4.89
	47.26

Sources: Manufacturing employment from U.S. Bureau of Census (Manufacturing Censuses), 1929 and 1931; City per capita poor relief in nominal terms from Baird (1942). They are adjusted to 1990 dollars using the 1967 CPI from U.S. Bureau of the Census 1975, series E-135, p. 211 and then multiplying by 3.91, which is the CPI conversion factor for 1967 dollars to 1990 dollars from Officer and Williamson's Measuring Wealth website.

Table 4
Cross-State Correlations of Maximum Benefits from Income Maintenance Programs Between Different Years

Maximum Weekly Unemployment Payments in 1967 Dollars

	1940	1950	1960	1970	1980	1990	2000
1940	1						
1950	0.1069	1					
1960	0.3534	0.4201	1				
1970	0.0462	0.4291	0.534	1			
1980	0.078	0.375	0.2474	0.4323	1		
1990	-0.022	0.448	0.2485	0.5169	0.6552	1	
2000	-0.1714	0.501	0.2898	0.4383	0.5141	0.8037	1

Workers' Compensation Expected Benefits

	1930	1940	1950	1960	1970	1980	1990	2000
1930	1							
1940	0.9203	1						
1950	0.7834	0.7658	1					
1960	0.6761	0.6551	0.913	1				
1970	0.5833	0.598	0.7968	0.8552	1			
1980	0.2724	0.2903	0.3632	0.4235	0.5045	1		
1990	0.2758	0.3118	0.3876	0.4044	0.4683	0.8441	1	
2000	0.2624	0.2824	0.4046	0.3926	0.426	0.624	0.6868	1

Mothers' Pension (1919)/Aid to Dependent Children (1940-1960)/Aid to Families With Dependent Children (1970-1990)/Temporary Assistance to Needy Families (2000)

	1919	1940	1950	1960	1970	1980	1990	2000
1919	1							
1940	0.4074	1						
1950	0.3618	0.3416	1					
1960	0.1769	0.2935	0.7624	1				
1970	-0.0199	0.3382	0.4965	0.6963	1			
1980	0.1335	0.5034	0.3832	0.6425	0.9079	1		
1990	0.224	0.4773	0.2367	0.4802	0.8697	0.9383	1	
2000	0.206	0.4437	0.199	0.4551	0.8135	0.8849	0.9577	1

Sources: Workers' compensation expected benefits are from data set created by Samuel Allen and described in Allen (2004, 2009). Weekly maximums for unemployment are Moehling from Moffitt, Green Book, Allen 2004, 2009. The 1919 figures for mother's pensions are from Moehling (2007). For states with no maximum we chose a value that exceeded the highest maximum in the rest of the states. In all cases states with no law were treated as missing values. The values for Aid to Dependent Children in 1940 are the actual maximum paid by the state to a

family of four from data used by Carolyn Moehling (2006, 2007). States that had not yet switched to aid to dependent children were treated as missing in 1940.

Table 5
Correlations Across States Between Programs in Various Years

1940

	Workers' Comp.	Unemployment Insurance	Aid to Dependent Children	Personal Income	Average Weekly Earnings
Workers' Compensation	1				
Unemployment Insurance	0.0259	1			
Aid to Dependent Children	0.0867	0.1282	1		
Personal Income	0.1881	0.0871	0.5891	1	
Average Weekly Earnings	0.3692	0.1505	0.5623	0.7966	1

1950

	Workers' Comp.	Unemployment Insurance	Aid to Dependent Children	Personal Income	Average Weekly Earnings
Workers' Compensation	1				
Unemployment Insurance	-0.0007	1			
Aid to Dependent Children	0.2521	0.047	1		
Personal Income	0.2305	0.1286	0.7052	1	
Average Weekly Earnings	0.3925	0.1888	0.7462	0.7331	1

1960

	Workers' Comp.	Unemployment Insurance	Aid to Dependent Children	Personal Income	Average Weekly Earnings
Workers' Compensation	1				
Unemployment Insurance	0.2953	1			
Aid to Dependent Children	0.5498	0.5682	1		
Personal Income	0.4184	0.4233	0.6805	1	
Average Weekly Earnings	0.2026	0.3638	0.3701	0.2777	1

1970

	Workers' Comp.	Unemployment Insurance	Aid to Dependent Children	Personal Income	Average Weekly Earnings
Workers' Compensation	1				
Unemployment Insurance	0.4044	1			
Aid to Dependent Children	0.3636	0.4884	1		
Personal Income	0.4924	0.569	0.6258	1	
Average Weekly Earnings	0.2881	0.1462	0.4145	0.6194	1

1980

	Workers' Comp.	Unemployment Insurance	Aid to Dependent Children	Personal Income	Average Weekly Earnings
Workers' Compensation	1				
Unemployment Insurance	0.4376	1			
Aid to Dependent Children	0.382	0.3345	1		
Personal Income	0.4336	0.148	0.6173	1	
Average Weekly Earnings	0.3602	0.0979	0.3653	0.528	1

1990

	Workers' Comp.	Unemployment Insurance	SSI	Aid to Dependent Children	Personal Income
Workers' Compensation	1				
Unemployment Insurance	0.4187	1			
SSI	0.0816	0.2265	1		
Aid to Dependent Children	0.2753	0.407	0.7096	1	
Personal Income	0.3584	0.4883	0.5741	0.6883	1
Average Weekly Earnings	0.3688	0.3243	0.3575	0.4819	0.487

2000

	Workers' Comp.	Unemployment Insurance	SSI	Aid to Dependent Children	Personal Income
Workers' Compensation	1				
Unemployment Insurance	0.3079	1			
SSI	0.0431	0.1672	1		
Aid to Dependent Children	0.275	0.3572	0.691	1	
Personal Income	0.1388	0.5258	0.4743	0.4838	1
Average Weekly Earnings	0.1619	0.3055	0.0872	0.1507	0.4147

Sources: See Table 4.

Table 6
Regressions of the Natural Log of Benefit Levels in Census Years on Decade-Long Averages of Income and Political Variables With and Without Fixed Effects and Time Trends

	Expected Workers' Compensation Benefit			Maximum Weekly UI Benefit			Maximum ADC Benefit Base		
Decade Averages									
Percent Voting Democrat for President	0.004	0.011	0.010	0.004	0.003	0.000	0.014	0.000	-0.012
	2.14	*7.09*	*4.82*	*3.51*	*2.03*	*-0.1*	*4.28*	*0.03*	*-2.36*
Percent Voting for a Presidential Candidate outside the Major Parties	0.002	0.007	0.003	0.002	0.002	-0.002	-0.001	0.000	-0.012
	0.97	*3.2*	*1.2*	*1.02*	*1.17*	*-0.87*	*-0.37*	*-0.1*	*-1.56*
Democrats control Governor and Both Houses of State Legislatures	0.081	0.072	0.032	0.014	0.055	0.008	0.104	-0.040	-0.083
	1.07	*1.26*	*0.56*	*0.32*	*1.35*	*0.18*	*0.94*	*-0.62*	*-1.37*
Democrats control Governor and Both Houses of State Legislatures in South	-0.254	-0.229	-0.106	-0.060	-0.070	-0.007	-0.764	0.092	0.175
	-3.7	*-2.51*	*-1.04*	*-1.46*	*-1*	*-0.07*	*-5.76*	*0.86*	*1.83*
Republican Control of Governor and Both Houses of State Legislature	-0.243	0.037	-0.066	-0.063	0.029	0.009	0.160	-0.030	-0.033
	-3.5	*0.6*	*-1.08*	*-1.34*	*0.57*	*0.16*	*1.48*	*-0.45*	*-0.57*
Years in which Both Houses of State Legislature Shifts	-0.025	0.087	-0.037	0.368	0.192	0.271	1.124	-0.146	0.175
	-0.09	*0.48*	*-0.16*	*2.14*	*1.26*	*1.54*	*2.17*	*-0.53*	*0.77*
Natural Log of Per Capita State Personal Income in $1967	0.777	0.186	-0.429	0.336	-0.040	0.023	-0.604	0.001	0.144
	23.91	*1.68*	*-2.02*	*13.29*	*-0.47*	*0.2*	*-5.54*	*0*	*0.43*
Year Fixed Effects	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
State Fixed Effects	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
State Time Trends	No	No	Yes	No	No	Yes	No	No	Yes

Notes and Sources: Dependent variables are in natural logs and come from sources in Table 4. Decade-long averages of state per capita income were calculated with data collected by Samuel Allen (2009).

Table 7
Results of Cliometric Studies of Impact of Social Welfare Programs during the Period 1900 to 1950

Program	Citation	Effect	Data	Method
Workers' Compensation, 1907-1923	Fishback and Kantor (1995)	**Wages**: Higher workers' compensation expected benefits associated with lower wages for nonunion workers but not union workers.	Panel: Annual state averages for occupations 1907-1923	Controls plus state, year, and occupation fixed effects with proxy measure of WC Benefits to control for endogeneity
Workers' Compensation, 1930s	Balkan (1998)	**Wage Rates**: Workers' compensation was associated with lower wages	Unbalanced panel of hourly earnings for 72 industries in 48 states for years 1933, 1935, 1937, and 1939	Correlates and state and year fixed effects. Lagged proxy of workers' compensation benefit.
Workers' Compensation, 1917-1919	Fishback and Kantor (1996)	**Savings**: Higher workers' compensation expected benefits associated with reduced savings.	Cross Section of individual working class families, 1917-1919	Control for income, family structure, age, accident risk. Measure of Expected Benefit used workers' actual wage.
Unemployment Insurance, 1930s	Balkan (1998)	**Wages**: Introduction of Unemployment Insurance in late 1930s had little impact on wages	Unbalanced panel of hourly earnings for 72 industries in 48 states for years 1933, 1935, 1937, and 1939	Correlates and state and year fixed effects. Lagged measure of UI maximum paid for maximum duration.
Workers' Compensation, 1903-1930	Fishback (1987)	**Accident Rates**: Introduction of workers' compensation laws associated with higher fatal accident rates in the coal industry.	Panel: Annual state averages for coal industry, 1903-1930	Controls for mine inspections, coal mining activity, technology, unions, mine size.

Workers' Compensation, 1900-1940	Chelius (1977)	**Accident Rates**: Introduction of workers' compensation law associated with fall in nonfatal machinery accident rates per member of labor force.	Panel: 26 states from 1900 to 1940	State fixed effects plus controls for state inspections
Workers' Compensation, 1900-1940	Buffum (1992)	**Accident Rates**: Introduction of workers' compensation associated with lower nonfatal machinery accident rates.	Panel: 26 states from 1900 to 1940	Controls for factory inspection spending and various measures of structures of industry
Workers' Compensation, 1900-1940	Buffum (1992)	**Accident Rates**: Fatal industrial accidents per 100,000 workers rise in workers' compensation states.	Panel 8 states from 1900 to 1940	Controls for factory inspection spending and various measures of structures of industry
Workers' Compensation, 1900-1930	Buffum (1992)	**Accident Rates**: Fatal accident rate in bituminous coal mining higher in workers' compensation states.	Panel of 24 coal mining states, 1900-1930	State effects and variety of controls.
Mother's Pensions (precursor of ADC), 1910-1920	Moehling (2007)	**Family Structure**: More generous Mothers' pensions associated with increases in divorces and separations. States that extended eligibility to mothers other than widows experienced increases in births to single mothers.	Pooled Individual data of different people from 1910 and 1920 census from 48 states.	Equivalent of state and year fixed effects with controls for many correlates.
Aid to Dependent Children, 1940-1970	Moehling (2007)	**Family Structure**: ADC benefits not associated with more single motherhood for blacks in years 1940-1970 or for whites 1940-1960. Positive elasticity of 0.23 to 0.37 for whites in 1970.	Individual cross-sections from 1940, 1950, 1960, and 1970 from census.	Controls for individual characteristics and state-level economic factors.

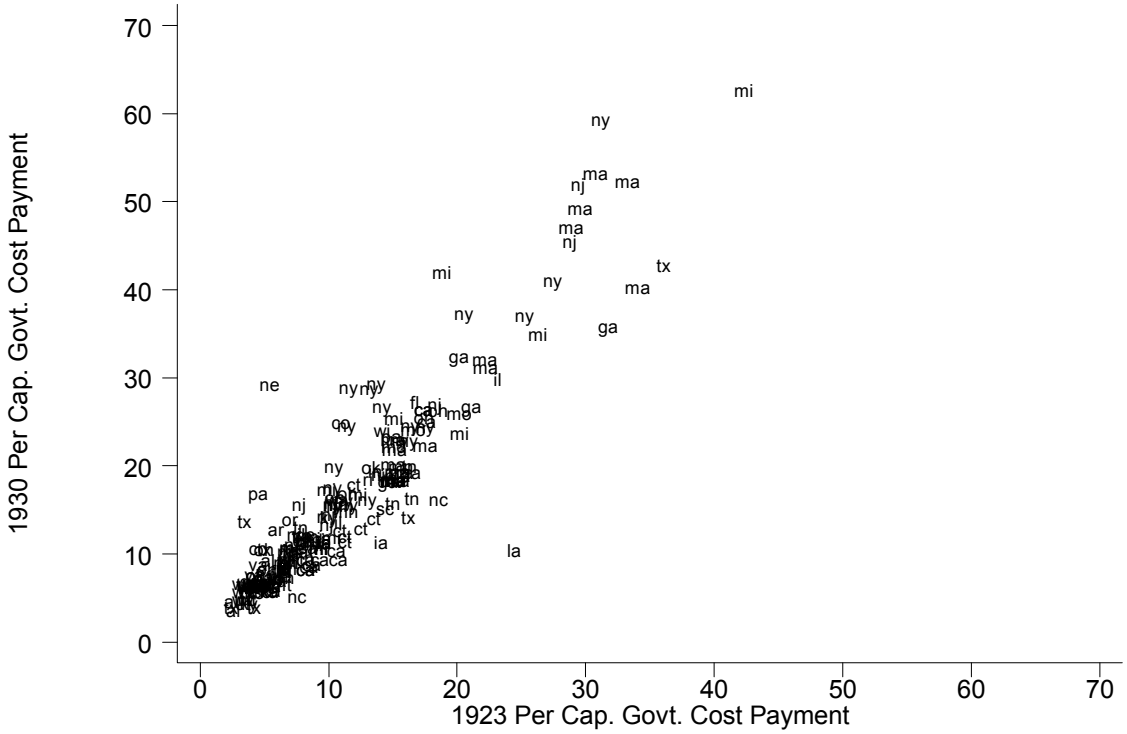
Old Age Assistance, 1940 and 1950	Costa (1999)	**Family Structure**: Elderly women more likely to live on own.	Pooled Cross-Sections of Different Individuals from Census, 1940 and 1950	Controls for individual characteristics, state and region fixed or random effects, differencing between eligible and noneligible populations.
Old Age Assistance, 1940 and 1950	Friedberg (1999)	**Labor Force Participation**: Higher Old Age Assistance Benefits lowered Labor Force Participation Among the Elderly	Pooled Cross-Sections of Different Individuals from Census, 1940 and 1950	Probit with controls for individual characteristics and state economic conditions with state and year fixed effects. Additional regressions to show no effect for people not eligible for program
Old Age Assistance, 1930-1950	Parsons (1991)	**Labor Force Participation**: OAA benefits account for about half of the decline in the elderly work force between 1930 and 1950	Panel of State Averages, 1930, 1940, and 1950	Pooled regressions with controls and with random effects.
Old Age Assistance, 1934-1955	Balaan Cohen (2009)	**Death Rates of Elderly**: Old Age Assistance reduced several types of mortality after 1940 but not before.	Pane: Annual Averages for 48 states, 1934-1955; 1937-1955; 1940-1955	State and year fixed effects and state specific time trends with instrument for Old-Age Assistance variable, plus regression to show no effects for people not eligible for program
Old Age Assistance, 1930-1938	Stoian and Fishback (forthcoming)	**Death Rates of Elderly**: Old Age Assistance did not reduce elderly death rates	Panel: Annual averages for 75 cities, 1930-1940	Difference between eligible and non-eligible age groups with city and year fixed effects and instrument for Old Age Assistance variable

Local Public Aid to Poor, 1923-1932	Fox (2009)	**Infant and Child Death Rate**s: About $781,000 (in 2007$) of poverty relief associated with reduction of one infant death in fixed effects estimates. Effect reduced by city-specific time trends. No effect on children of other ages.	Panel: Annual averages for 67 cities, 1923-1932	Controls for city characteristics, city and year fixed effects, city-specific time trends.
New Deal Relief Spending, 1929-1940	Fishback, Haines, and Kantor (2007)	Death and Birth Rates: About $2 million (in 2000$) in additional relief spending associated with reduction of one infant death, half a homicide, one suicide, 2.4 deaths from infectious disease, one death from diarrhea. A one-standard deviation increase in relief spending associated with 0.82 standard deviation rise in general fertility rate	Panel: Annual averages for 114 cities, 1929-1940	Controls for city characteristics, city and year fixed effects, instruments.
New Deal Relief Spending, 1930-1940	Johnson, Fishback, and Kantor (forthcoming)	**Crime Rates**: Ten percent rise in work relief spending associated with 1.5 percent reduction in property crime rate. Smaller effect of direct relief spending.	Panel: Annual averages for 81 large cities, 1930-1940	Controls for city characteristics, city and year fixed effects, city-specific time trends, and instruments.
New Deal Emergency Relief Employment, 1937, 1940	Fleck (1999)	**Private Employment**: Increase of one emergency relief job associated with an increase in measured unemployed but little effect on private employment	Separate Cross Sections of County Averages in 1937 and again in 1940	Large number of correlates and instrument for relief jobs.

New Deal Federal Emergency Relief Administration Employment, 1935	Wallis and Benjamin (1981)	**Private Employment**: Little or no effect of FERA cases per capita spending on private monthly wages. Little effect of FERA average benefits on FERA caseloads.	Cross Section of 52 cities in fiscal year, 1934-1935	In wage equation correlates for aggregated demand and prior wages. In case equation correlates and instruments for FERA benefit levels.
New Deal Relief spending, 1932-1940	Neumann, Fishback, and Kantor (2010 forthcoming)	**Private Employment**: Positive effect of relief spending on private employment prior to 1936. Negative effect of relief spending on private employment after 1936.	Panel of monthly averages from January 1933 through December 1939 for 44 major cities.	Panel VAR with differencing and controls for serial correlation. No endogeneity if there is a one-month or more lag in effects of each variable on other variables.
Relief Spending, 1930s	Matthews and Benjamin (1992)	**Private Employment**: An additional New Deal relief job crowded out about one-third of a private job in 1933 and about nine/tenths of a private job in 1939	Panel of annual state averages, 1932 Through 1939	Pooled regressions with controls and instruments
New Deal Relief and Public Works Spending, 1933-1939	Fishback, Horrace, and Kantor (2005)	**Retail Sales**: Dollar increase of public works and relief spending per capita associated with rise in retail sales per capita of roughly 40 cents.	Cross-section of Growth rates for U.S. Counties, 1929-1939, 1929-1935, 1933-1939	Large number of correlates and instrument for public works and relief.
New Deal Relief and Public Works Spending, 1933-1939	Fishback, Horrace, and Kantor (2006)	**Net Migration**: Increase in public works and relief spending leads to increase in net migration.	Cross-section of county averages during 1930s.	Large number of correlates and instrument for public works and relief.
New Deal Relief and Public Works Spending, 1933-1939	Sorensen, Fishback, and Kantor (2009	**Internal Migration**: Public works and relief spending led to 15 percent more internal migration within the U.S.	Cross-section of 460 state economic areas, 1935-1940	Several correlates and instrument for public works and relief in a structural choice model.

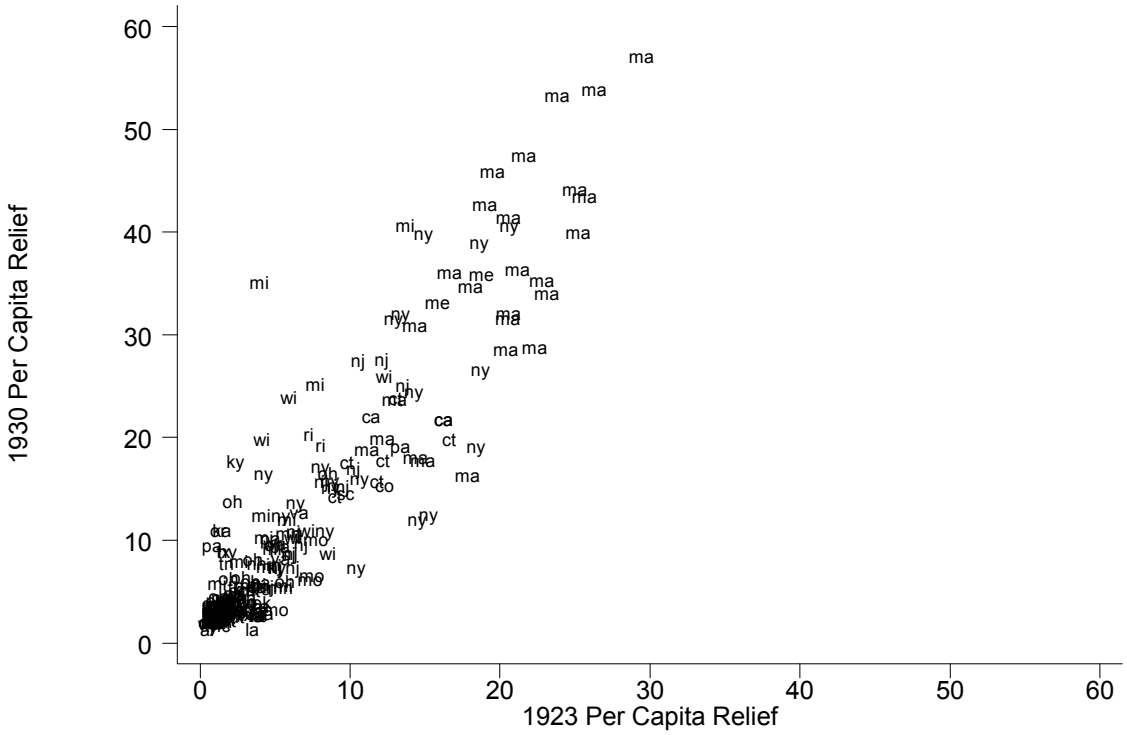
New Deal Relief Spending	Hungerman and Gruber (2008)	**Private Charitable Spending**: An additional dollar of New Deal spending reduced church charitable spending by about 29 percent of the maximum it could have reduced it.	Panel of annual state averages, 1933 through 1939.	State and year fixed effects, region-specific time trends, instruments

Figure 1
Per Capita Government Cost Payments on Hospitals by Cities and States in U.S, 1923 and 1930 (State Abbreviations)



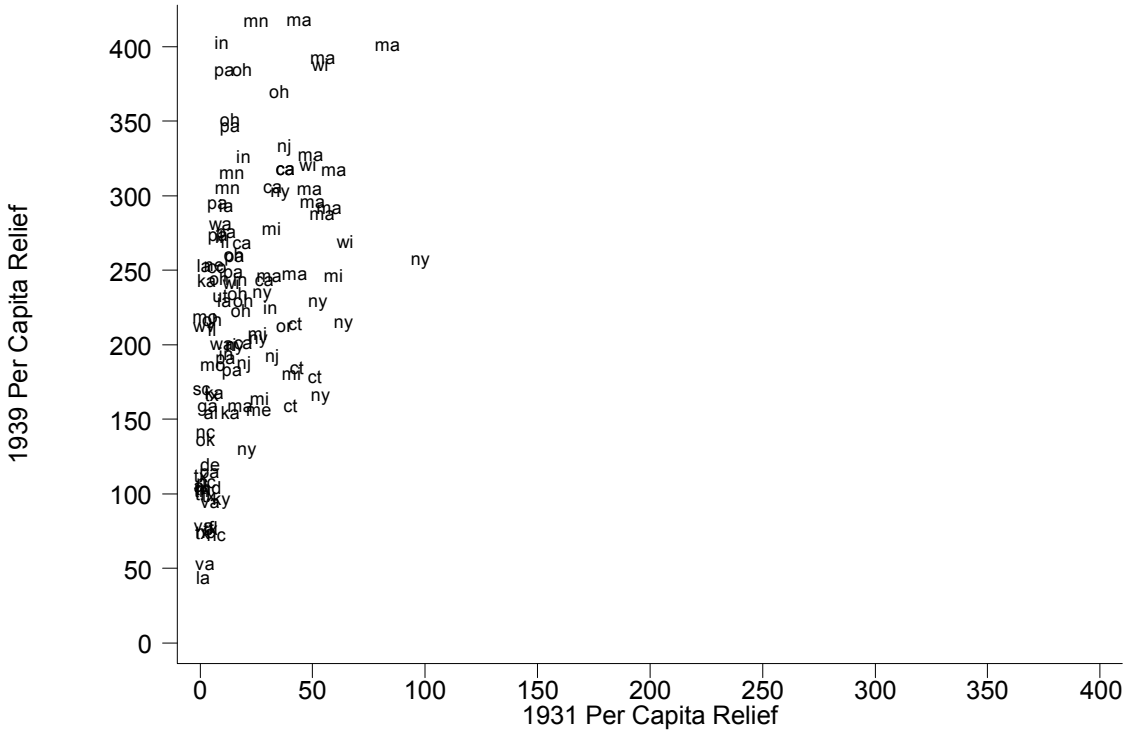
Sources: Estimates for U.S. cities are the sum of per capita spending on hospitals in the city plus per capita spending on hospitals for the state in 1923 and 1930 from the U.S. Bureau of the Census's *Financial Statistics of Cities* and *Financial Statistics of States* for 1923 and 1930 (U.S. Bureau of the Census 1925c, 1925s, 1932c, 1932s). The 1923 and 1930 values for the U.S. cities were adjusted to 1990 dollars using the CPI comparisons at Officer and Williamson's Measuring Worth website. We did not include spending on hospitals listed as transfers from state government to other governments to avoid double-counting if such state spending might have been used to fund city spending. County government spending is missing.

Figure 2
Rough Estimates of Per Capita Government Cost Payments on Poverty and Unemployment Relief in 1923 and 1930 by State and City Governments in 244 U.S. Cities in 1990 Dollars



Sources: Estimates for U.S. cities are the sum of per capita spending in the city plus per capita spending for the state in 1923 and 1930 from the U.S. Bureau of the Census's *Financial Statistics of Cities* and *Financial Statistics of States* for 1923 and 1930 (U.S. Bureau of the Census 1925c, 1925s, 1932c, 1932s). The 1923 and 1930 values for the U.S. cities were adjusted to 1990 dollars using the CPI comparisons at Officer and Williamson's Measuring Worth website. The per capita city spending includes governmental cost payments by the city government on outdoor poor relief, poor institutions, care of children, other charities, and mothers' pensions. The state per capita spending includes governmental cost payments for outdoor poor relief, state poor institutions care of children in state institutions, care of blind, deaf, and mute in state institutions, other charities in state institutions, relief to mothers and relief to all others. We did not include spending on poor institutions all other, care of children all other, care of blind, deaf and mute all other, and other charities all other to avoid double-counting if such state spending might have been used to fund city spending. Inclusion of this spending changes the positions in the figure only slightly. County government spending is missing.

Figure 3
Per Capita Government Direct and Work Relief Spending in 114 U.S. cities in 1931 and 1939 in 1990 Dollars



Source and notes. Data are from Baird (1942). They are adjusted to 1990 dollars using the 1967 CPI from U.S. Bureau of the Census 1975, series E-135, p. 211 and then multiplying by 3.91, which is the CPI conversion factor for 1967 dollars to 1990 dollars from Officer and Williamson's Measuring Wealth website. Per capita relief spending includes spending from federal, state, and local sources. It includes direct relief payments, work relief payments, and public assistance through old-age assistance, aid-to-the-blind, and aid to dependent child (mothers' pensions).

Figure 4a
Ratio of Expected Workers' Compensation Benefits to Annual Manufacturing Earnings for Typical Worker Paid National Average Manufacturing Wage with Three Dependents by State, 1940 and 1970

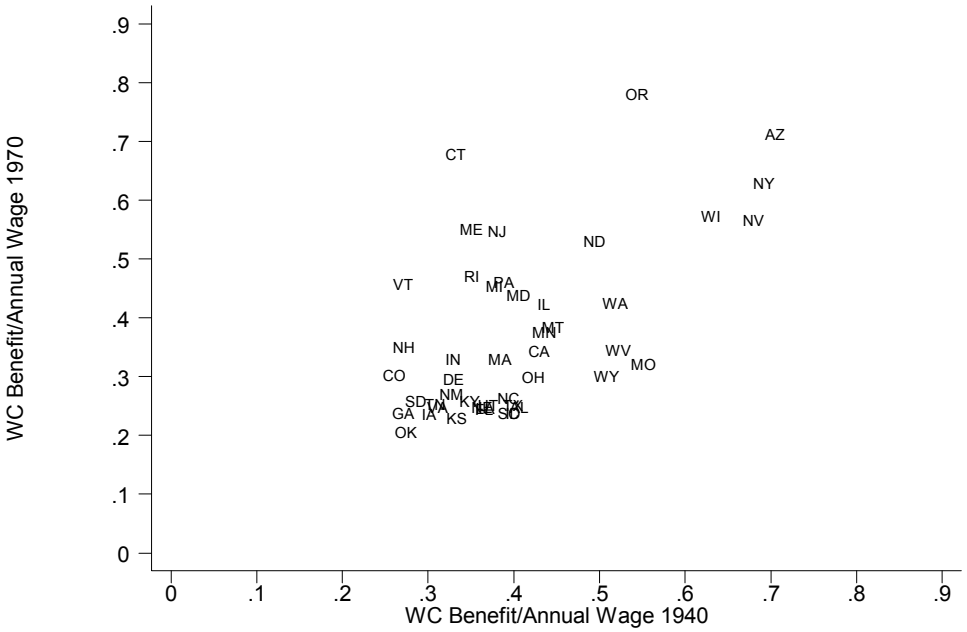
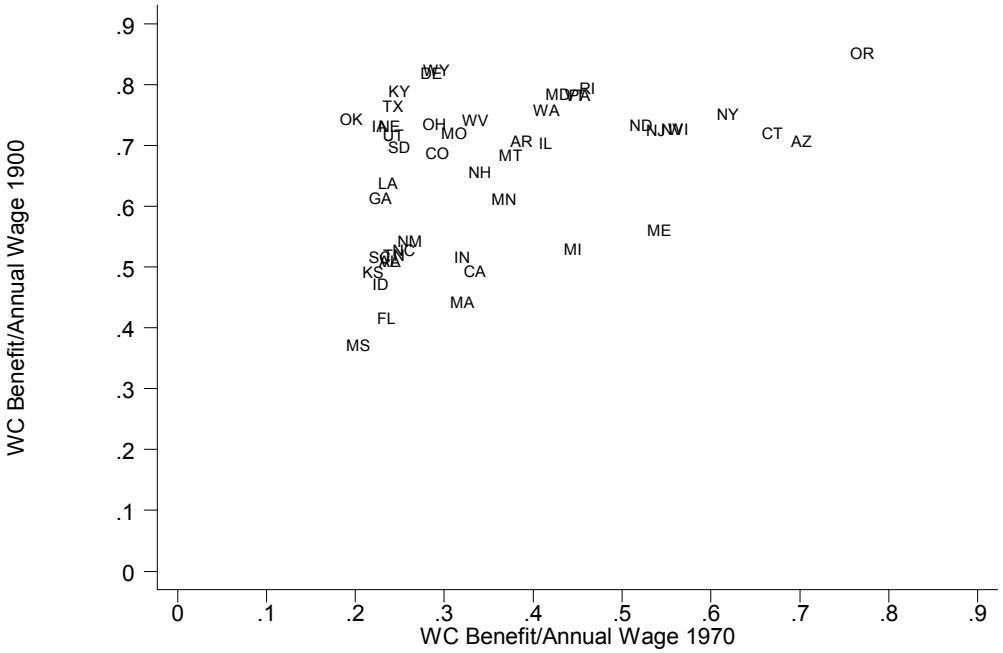


Figure 4b
1970 and 2000



Source: Source: See Allen (2009, 2004). The average expected benefit as a share of annual manufacturing earnings shows the typical workers' compensation payments for different types of injuries weighted by the probability of the accident in 1940 divided by a measure of the national average wage. The ratio here is for a worker with the national average weekly earnings. State workers' compensation benefits are calculated based on the workers average earnings, the extent of the injury, and waiting periods. Payouts for different types of injuries turn out to vary in ways across states that do not lead to especially high correlations across types of accidents. As a result, Samuel Allen (2009, 2004) and Price Fishback and Shawn Kantor (2000) developed a comprehensive expected benefits measure for workers' compensation based on the discounted present value at the time of the accident of the typical stream of workers' compensation benefits for four types of accidents: temporary total disability that lasts five weeks, a permanent partial disability of the loss of a hand (adjusted downward because most permanent partial disabilities are less severe), permanent total disability, and death). The discount rate for the present value is assumed to be 5 percent, which has been a typical discount rate chosen when states paid out lump sums. The "typical" worker was assumed to be a married man with a wife and two children ages 8 and 10, and he was earning the national average in the year. The present values of the payout are then weighted by the probability of each type of accident in 1940. This expected benefit is then reported as a percentage of the annual earnings someone would receive earning the national weekly wage for the year. The goal in the measure is to show how the expected benefits as a share of the wage change across time and place based on the parameters in the law. Had we allowed the accident rates used to weight the payments for each type of injury to vary across years, the expected benefit ratio would have trended downward because accident rates trended downward over the course of the century.

Figure 5a
Aid to Dependent Children to Family of 3 in 1970 and Maximum Payment to Family of 4 in 1940 in 1967 Dollars

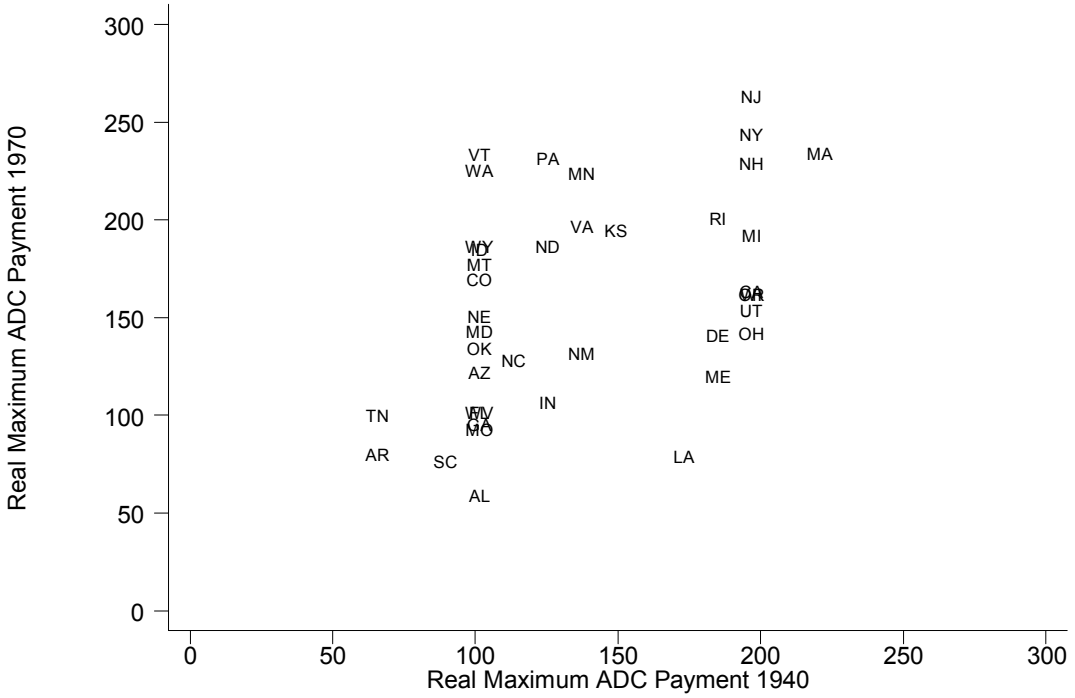
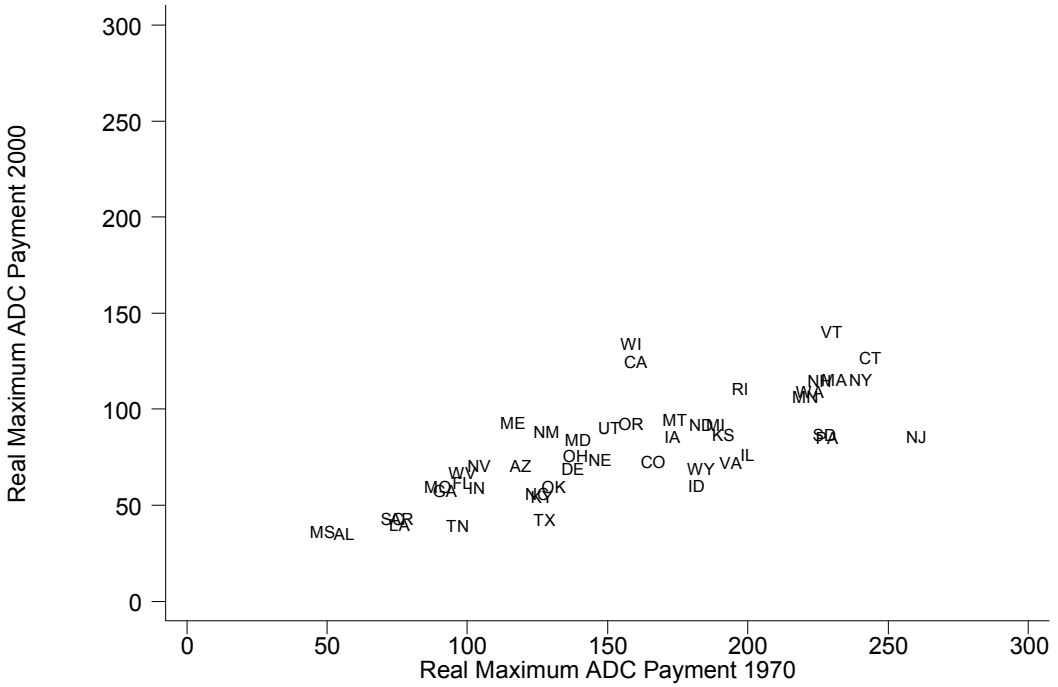
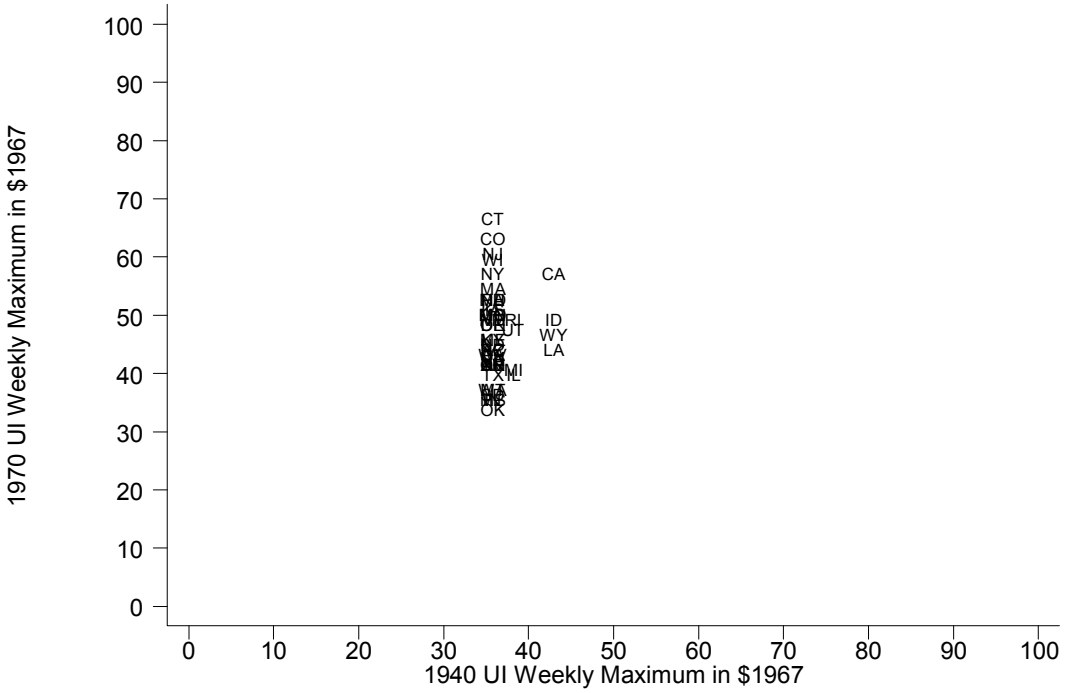


Figure 5b
Aid to Dependent Children Maximum Payment to Family of 3 in 1970 and ADC/Temporary Aid to Needy Families Maximum Payment in 2000 in 1967 Dollars

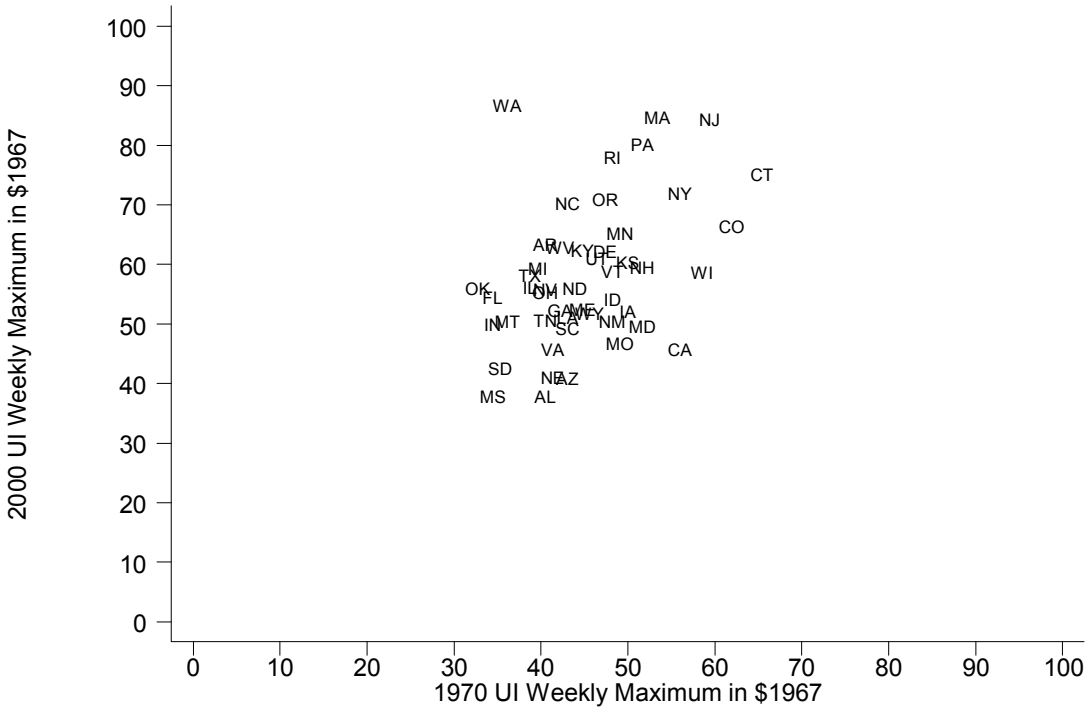


Sources: The 1940 payments are from data set provided by Carolyn Moehling from her 2006 and 2007 papers. The 1970 and 2000 payments are from U.S. House of Representatives, Ways and Means Committee 1990, 2000). The 1940 payments are the highest payments reported for ADC for families of four. In a number of cases the actual maximum exceeded the maximum listed in the state statute. A number of states had no maximums. The 1970 and 2000 payments are the maximums listed in the law.

Figure 6a
Maximum Weekly Unemployment Benefits in 1940 and 1970 in $1967

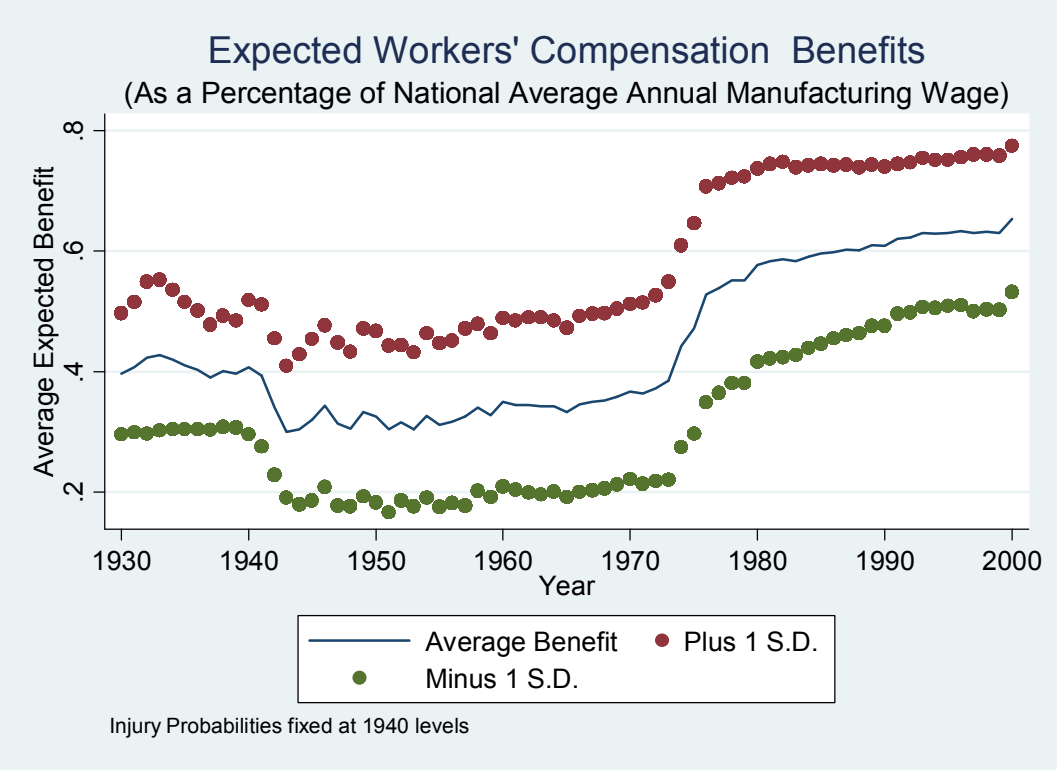


Maximum Weekly Unemployment Benefits in 2000 and 1970 in $1967



Source: The data on unemployment weekly maximums can be found on the United States Department of Labor: Employment and Training Administration's website. http://workforcesecurity.doleta.gov/unemploy/statelaws.asp#sigprouilaws

Figure 7



Source: Allen 2009.

References

Abrams, Burton and Schmitz, Mark. (1978) The "crowding-out" effect of governmental transfers on private charitable contributions. *Public Choice* 53(1):

Abrams, Burton A. and Schmitz, Mark D. (1984) The crowding-out effect of governmental transfers on private charitable contributions: cross-section evidence. *National Tax Journal* 37(4): 563-68.

Allen, Samuel. (2004) *The Economics and Politics of Workers' Compensation, 1930-2000. Ph.D*. Dissertation at the University of Arizona.

Allen, Samuel. (2009) State variation in workers' compensation insurance: the political economy of benefits, 1930-2000. Virginia Military Institute Working Paper.

Baicker, Katherine, Claudia Goldin and Lawrence Katz. (1998) A distinctive system: origins and impact of U.S. unemployment compensation, in the *Defining Moment: The Great Depression and the American Economy in the Twentieth Century*, edited by Bordo, Michael, Claudia Goldin, and Eugene N. White. Chicago: Chicago University Press.

Balan-Cohen, Andreea. (2008) The effect on elderly mortality: evidence from the old age assistance programs in the United States." Unpublished working paper. Tufts University.

Bowlbis, John. (forthcoming) "The decline in infant death rates, 1878 -1913: The role of early sickness insurance programs." *Journal of Economic History*.

Buffum, David. (1992) *Workmen's Compensation: Passage and Impact*. Ph.D. dissertation, University of Pennsylvania.

Clark, Robert L., Lee Craig, and Jack Wilson. (2003) *A History of Public Sector Pensions in the United States. Philadelphia*, PA: University of Pennsylvania Press.

Chelius, James R. (1976) Liability for industrial accidents: a comparison of negligence and strict liability systems. *Journal of Legal Studies* 5: 293-309.

Chelius, James R. (1977) *Workplace Safety and Health: The Role of Workers' Compensation*. Washington, DC: American Enterprise Institute.

Costa, Dora L.. (1998) *The Evolution of Retirement: An American Economic History, 1880-1990*. Chicago, Il: University of Chicago Press.

Costa, Dora L. (1999) A house of her own: old age assistance and the living arrangements of older nonmarried women. *Journal of Public Economics* 72: 39-59.

Couch, Jim, and Shugart, William. (1998) *The Political Economy of the New Deal*. New York, NY: Edward Elgar.

Darby, Michael R. (1976) Three and a half million U.S. employees have been mislaid: or, an explanation of unemployment, 1934-1941. *Journal of Political Economy* 84: 1-16.

DeParle, Jason. (2009) For victims of recession, patchwork state aid. *New York Times* May 10.

Emery, George and John Charles Herbert Emery. (1999) *A Young Man's Benefit: The Independent Order of Odd Fellows and Sickness Insurance in the United States and Canada, 1860-1929*. Montreal, CA: McGill-Queens Press.

Fishback, Price. (2009) Social expenditures in the United States and the Nordic Countries: 1900-2003. Paper presented at the International Economic History Association Congress in Utrecht, the Netherlands in August 2009.

Fishback, Price V., Michael R. Haines and Shawn Kantor. (2001) The impact of the New Deal on black and white infant mortality in the south. *Explorations in Economic History* 38: 93-122.

Fishback, Price, William Horrace, and Shawn Kantor. (2005) The impact of New Deal expenditures on local economic activity: an examination of retail sales, 1929-1939." *Journal of Economic History* 65: 36-71.

Fishback, Price, William Horrace, and Shawn Kantor. (forthcoming 2010) Do federal programs affect internal migration? The impact of New Deal expenditures on mobility during the Great Depression. *Explorations in Economic History.*

Fishback, Price, Shawn Kantor and John Wallis (2003) Can the New Deal's Three R's be rehabilitated? A program-by-program, county-by-county analysis." *Explorations in Economic History* (October): 278-307.

Fishback, Price and Shawn Kantor. (2000) *Prelude To The Welfare State: The Origins of Workers' Compensation*. Chicago, Il: University of Chicago Press.

Fishback, Price, Shawn Kantor and John Wallis. (2006) Institutional designs and the problem of corruption during the New Deal. *Corruption and Reform*, edited by Claudia Goldin and Edward Glaeser. Chicago: University of Chicago Press.

Fishback, Price and Melissa Thomasson. (2006) Social welfare: 1929 to the present. In Carter, Susan, Gartner, Scott Sigmund, Haines, Michael, Olmstead, Alan, Sutch, Richard and Wright, Gavin (eds.) *Historical Statistics of the United States: Millennial Edition,Volume 2*. New York, NY: Cambridge University Press.

Fleck, Robert. (1999a) Electoral incentives, public policy, and the New Deal realignment. *Southern Economic Journal* 63(January): 377-404.

Fleck, Robert. (1999b) The marginal effect of New Deal relief work on county-level unemployment statistics. *Journal of Economic History* 59(September): 659-87.

Fleck, Robert. (1999c) The value of the vote: a model and test of the effects of turnout on distributive policy. *Economic Inquiry* 37(October): 609-623.

Fleck, Robert. (2001a) Inter-party competition, intra-party competition, and distributive policy: a model and test using New Deal data. *Public Choice* 108(July): 77-100.

Fleck, Robert. (2001b) Population, land, economic conditions, and the allocation of New Deal spending. *Explorations in Economic History* 38(April): 296-304.

Fleck, Robert. (2002) Democratic opposition to the Fair Labor Standards Act of 1938. *Journal of Economic History* 62(March): 25-54.

Fox, Jonathan. (2009) "Public Health Movements, Local Poor Relief and Child Mortality in American Cities: 1923-1932." Unpublished working paper. University of Arizona.

Friedberg, Leora. (1999) The effect of old age assistance on retirement. *Journal of Public Economics*. 71:,213-232.

Gruber, Jonathan and Hungerman, Daniel. (2007) Faith-based charity and crowd-out during the Great Depression. *Journal of Public Economics* 91.

Hannon, Joan Underhill. (1984) Poverty and the antebellum Northeast: the view from New York State's poor relief rolls. *Journal of Economic History* 44: 1007-1032.

Hannon, Joan. (1984) The generosity of antebellum poor relief. *Journal of Economic History* 44(3).

Hannon, Joan. (1985) Poor relief policy in antebellum New York State: the rise and decline of the poorhouse. *Explorations in Economic History* 22(3).

Hannon, Joan Underhill. (1997) Shutting down welfare: two cases from America's past. *Quarterly Review of Economics and Finance* 37: 419-438.

Kiesling, Lynne and Robert Margo. (1997) Explaining the rise in antebellum pauperism: 1850-1860. *Quarterly Review of Economics and Finance* 37: 405-18.
Lindert, Peter. (1994) The rise of Social Spending, 1880-1930. *Explorations in Economic History* 31: 1-37.
Lindert, Peter. (2004) *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century*. Cambridge, MA: Cambridge University Press.
Livingston, Brendan. (2009) The safety net in Massachusetts, 1900-1930: a study of the demand for poverty relief. Unpublished working paper. University of Arizona. Massachusetts State Board of Charity. *Annual Report of the State Board of Charity of Massachusetts*. Boston: Wright & Potter Printing Co., for the years 1900 through 1919.
Massachusetts Department of Public Welfare. *Annual Report of the Department of Public Welfare*. Boston: Wright & Potter Printing Co., for years 1920 through 1930
Matthews, Kent and Daniel Benjamin. (1992) *U.S. and U.K. Unemployment Between the Wars: A Doleful Story*. London: Institute of Economic Affairs.
McJimsey, George. (1987) *Harry Hopkins: Ally of the Poor and Defender of Democracy*. Cambridge, MA: Harvard University Press.
Moehling, Carolyn. (2006) Mothers' pension legislation and the cross-state variation in welfare generosity. Unpublished working paper. Yale University, August.
Moehling, Carolyn. (2007) The American welfare system and family structure: an historical perspective. *Journal of Human Resources* 42: 117-155.
Murray, John. (2007) *Origins of American Health Insurance: A History of Industrial Sickness Funds*. New Haven: Yale University Press, 2007.
Officer, Lawrence H. and Samuel H. Williamson. (2009) Purchasing power of money in the United States from 1774 to 2008. *MeasuringWorth*. URL: http://www.measuringworth.com/ppowerus/.
Orloff, Ann. (1993) *The Politics of Pensions: A Comparative Analysis of Britain, Canada, and the United States*. Madison, WI: University of Wisconsin Press.
Parsons, Donald O. (1991) Male retirement behavior in the United States, 1930-1950. *Journal of Economic History* 51: 657-674.
Raphael, Steven and Rudolf Winter-Ebmer. (2001) Identifying the effect of unemployment on crime. *Journal of Law and Economics* 64(April): 259-283.
Reading, Don C. (1973) New Deal activity and the States, 1933 to 1939 *Journal of Economic History* 33(December): 792-810.
Skocpol, Theda. (1992) *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States*. Cambridge, MA: Belknap Press of Harvard University Press.
Social Security Administration. *Social Security Bulletin: Annual Statistical Supplement* (SSBASS), various years.
Stoian, Adrian and Price Fishback. (2010) Welfare spending and mortality rates for the elderly before the Social Security era. *Explorations in Economic History*, forthcoming.
Stromberg, David (2004) Radio's impact on public spending. *Quarterly Journal of Economics* 119 (February): 189-221.
Sule, Balkan. *Social Insurance Programs and Compensating Wage Differentials in the United States*. University of Arizona PhD. Dissertation, 1998.
Thomasson, Melissa. (1998) *From Sickness to Heath: The Twentieth Century Development of the Demand for Health Insurance*. PhD dissertation, University of Arizona, 1998.

Thomasson, Melissa. (2002) From sickness to health: the twentieth century development of U.S. health insurance. *Explorations in Economic History* 39: 233-253.

Thompson, Laura. (1919) Laws relating to 'mothers' pensions' in the United States, Canada, Denmark, and New Zealand.*U. S. Department of Labor, Childrens' Bureau Publication No. 63, Legal Series No. 4*. Washington DC: Government Printing Office.

U.S. Bureau of the Census. (1923) *Birth, Stillbirth, and Infant Mortality Statistics, 1921: Seventh Annual Report*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1925a) *Biennial Census of Manufactures, 1923*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1925b) *Financial Statistics of Cities Having a Population over 30,000, 1923*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1925c) *Financial Statistics of States, 1922*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1931a) *Financial Statistics of Cities Having a Population over 30,000, 1929*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1931b) *Financial Statistics of States, 1929*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1932a) *Financial Statistics of Cities Having a Population over 30,000, 1929*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1932b) *Financial Statistics of States, 1930*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1933a) *Fifteenth Census of the United States, Manufactures: 1929, Volume III*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1934) *Biennial Census of Manufactures, 1931*. Washington: Government Printing Office.

U.S. Bureau of the Census. (1943) *Sixteenth Census of the United States, Manufactures: 1939, Volume III*. Washington: Government Printing Office.

U.S. Bureau of the Census. (2007) Income, poverty, and health Insurance coverage in the United States: 2006. *Current Population Reports, P60-233*. Washington, D.C.: Government Printing Office.

U.S. Children's Bureau. (1930) *Eighteenth Annual Report of the Children's Bureau*. Washington, DC: Government Printing Office..

United States Committee on Economic Security. (1937) *Social security in America; the factual background of the Social security act as summarized from staff reports to the Committee on Economic Security*. Washington, DC: Government Printing Office.

Wallis, John Joseph. (1984) The birth of the old federalism: financing the New Deal, 1932-1940. *Journal of Economic History* 44(March): 139-59.

Wallis, John Joseph. (1985) Why 1933? The origins and timing of national government growth, 1933-1940. *Research in Economic History* 4:1-51.

Wallis, John Joseph. (1987) Employment, politics, and economic recovery during the Great Depression. *Review of Economics and Statistics* 69(August): 516-20.

Wallis, John Joseph. (1991) The political economy of New Deal fiscal federalism. *Economic Inquiry* 39(July): 510-524.

Wallis, John Joseph. (1998) The political economy of New Deal spending revisited, again: with and without Nevada. *Explorations in Economic History* 35(April): 140-70.

Wallis, John Joseph. (2001) The political economy of New Deal spending, yet again: a reply to Fleck. *Explorations in Economic History* 38(April): 305-14.

Wallis, John Joseph, and Benjamin, Daniel K. (1981) Public relief and private employment in the Great Depression. *Journal of Economic History* 41(March): 97-102.

Wallis, John Joseph. (1989) Private employment and public relief during the Great Depression. Working paper. Department of Economics, University of Maryland.

Winegarden, C.R. and John E. Murray. (1998) The contributions of early health-insurance programs to mortality declines in pre-World War I Europe: evidence from fixed-effects models. *Explorations in Economic History* 35(4): 431-446

Wright, Gavin. (1974) The Political Economy of New Deal Spending: An Econometric Analysis. *Review of Economics and Statistics* 56(February): 30-38.

Ziliak, Stephen. (1996) The end of welfare and the contradiction of compassion. *Independent Review* 1: 55-73.

Ziliak, Stephen. (1997) Kicking the Malthusian vice: lessons from the abolition of "welfare" in the late nineteenth century. *Quarterly Review of Economics and Finance* 37: 449-68.

Ziliak, Stephen. (2002a) Pauper fiction in economic science: paupers in almshouses and the odd fit of Oliver Twist. *Review of Social Economy* 60: 159-81.

Ziliak, Stephen. (2002b) Some tendencies of social welfare and the problem of interpretation. *Cato Journal* 21(Winter): 499-513.

Ziliak, Stephen and Joan Hannon. (2006) Public Assistance: Colonial Times to the 1920s, in Carter, Susan, Gartner, Scott Sigmund, Haines, Michael, Olmstead, Alan, Sutch, Richard and Wright, Gavin (eds.) *Historical Statistics of the United States: Millennial Edition, Volume 2*. New York, NY: Cambridge University Press, pp. 2-693 to 2-702 and 2-720 to 2-733