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THE NEWEST ON THE NEW DEAL

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This paper is a written version of the keynote speech presented at the Economic and Business History Society conference in Oklahoma City, Oklahoma on May 26, 2017. I summarize existing research on the distribution and impact of New Deal spending and lending programs and also discuss several new strains of New Deal research.

Introduction

It has been a great honor to be invited to give the keynote speech at the EBHS conference. While attending the meeting, I drew great pleasure from learning about the new research of my colleagues. It was a particular pleasure to get to see the research of a number of scholars I had not met previously. Given the conference's focus on new research, my plan in this paper (as it was in the speech) is to focus on research projects that are in progress—some in working paper form and some that are still percolating.

For the past two decades I have been working with Shawn Kantor and a number of other coauthors on studying the political economy of Franklin Roosevelt's New Deal. Our goal has always been to provide a comprehensive analysis of the political economy of New Deal spending and lending programs using microeconomic analysis. There have been some macroeconomic studies of the New Deal and the recovery from the Great Depression but they are hampered both by a general tendency to treat all spending the same, as well as the limitations set by the use of aggregated time series data. We have been compiling data at the sub-county, county, city, and state levels of aggregation. Recently we have begun combining these data with person-level data from the 1930 and 1940 census. There was a large amount of variation in how much the federal government spent and loaned from the various programs in these areas. We have been using that variation across place and time to examine

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the impact of the programs while controlling for a wide range of correlates as well as for the potential endogeneity and simultaneity arising from the political economy of the distribution of funds.

Another feature of the research is to take into account the different objectives of the programs. For example, the AAA paid farmers to reduce production, the work relief programs gave out the equivalent of modern unemployment benefits but required people to work in return, while the public works and roads programs paid full wages. Our goal has been therefore to identify the different effects we might see from these programs.

Over the last few years I have written a series of survey articles about the New Deal research for various audiences. The most recent is a version for economists in the *Journal of Economic Literature* (Fishback 2017) that covers the research up through the end of 2015 and provides information about the identification used in each analysis—for example whether the authors employed difference-in-difference analysis or used instrumental variables to control for endogeneity and simultaneity. To save space on footnotes and references in the current paper, the references for much of the prior work I summarize can be found in that paper.

I have written some other surveys that are targeted at more general audiences. A survey written for undergraduates and graduate students is forthcoming in the *Oxford Handbook of American History* (Fishback forthcoming 2018). The goal there is to provide intuition about the type of variation being used to measure the impact of the New Deal when using fixed effects analysis and instrumental variable analysis. Another survey provides an overview of the Great Depression of the 1930s and the New Deal for undergraduates and non-economists appears in the *Handbook of Cliometrics* (Fishback 2016).

Although I am not a macroeconomist, I wrote a survey of the macroeconomics literature on the Great Depression and New Deal, which focused upon monetary and fiscal policy in research done between 2000 and 2010 (Fishback 2010). John Wallis and I (2013) wrote a chapter in a volume on the Great Depression that emphasized the nature of government programs at the local, state, and national levels before the 1930s and how the New Deal programs changed those arrangements by changing the

locus of responsibility and funding and/or expanded the nature of overall government activity.

The paper will proceed as follows. First, as much of my prior work (with various coauthors) focuses on the distribution and impact of spending and lending programs, I will briefly summarize the findings in those areas. After this, I will discuss three new strains of New Deal research. First, in work with Valentina Kachanovskaya, I have been examining how the factors that influenced the distribution of national government expenditures across states changed between the Republican Presidential regimes from 1923 through 1932 (Calvin Coolidge and Herbert Hoover) to the Roosevelt regime under the New Deal (Fishback and Kachanovskaya 2017). Second, I will describe some preliminary results from my study of the relative access of blacks and whites to New Deal programs—specifically I will discuss the distribution of relief funds to black and white families at the county level by the Federal Emergency Relief Administration in 1933. Finally, there is still much to learn about the labor markets of the 1930s, however, such analysis is made difficult by the disequilibrium setting implied by high unemployment rates. I will sketch out how the predictions change in a simple disequilibrium model of supply and demand with an implicit wage minimum. In particular, I am interested in what happens when New Deal policies not only change labor supply and demand but also lead to shifts in the implicit wage minimum.

The Major New Deal Grant Programs and Their Impact

The lion's share of New Deal grant spending from 1933 through 1939 was distributed under four major types of programs. Roughly half went to relief grants, about 20 percent went to public works, about 20 percent went to payments to veterans, and 10 percent was distributed to farmers. In our analysis we have incorporated the veterans' programs into the relief programs.

Relief and Public Works Programs

The first major relief program was the Federal Emergency Relief Administration (FERA), which provided direct relief and work relief between the summer of 1933 and June 1935. The amount of relief given each household was determined by the budget-deficit principle, which

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evaluated the gap between households' actual income and the estimated minimum budget for a certain household size. Given the large number of households and limited grants, relief benefits distributed to each household provided only income maintenance and often did not cover the full household deficit. Typically, the hourly payments for work relief on FERA projects were between one-half and two-thirds of those paid by the Public Works Administration (PWA) and Public Roads Administration (PRA) jobs. The FERA spending was supplemented by the Civil Works Administration (CWA), which provided work relief with higher hourly earnings for up to 4 million between November 1933 and March 1934.

In 1935 the Works Projects Administration (WPA) replaced the FERA in providing the same type of work relief as FERA, in part to give the national government more control over the distribution of funds within states. Responsibility for direct relief to "unemployables" was returned to state and local governments. Under the Social Security Act of 1935 the national government provided additional aid through matching grants for programs to provide benefits for widows with dependent children, the blind, and the poor elderly that would allow them to live independently.

The public works grants of the New Deal aimed to provide federal support to the building of federal, state, and local public works projects, including highway construction and flood control. They included expenditures by the Public Works Administration (PWA), Public Buildings Administration (PBA), and the Public Roads Administration (PRA). In contrast to the relief programs, the public works program had the freedom to hire workers who were not on the relief rolls. Projects funded by the public works grants mostly focused on larger and longer-term projects. These projects hired workers at full market wage that were comparable to the wage rates paid in private industry.

The distribution of public works and relief grants to state and local areas had a variety of positive effects on the economy. An additional dollar per capita in such grants to a state was associated with a roughly one dollar increase in per capita income in the state. This multiplier of one is much smaller than the typical multipliers modern proponents claim when promoting the building of stadiums and other public works, but it still is a sizeable effect. The added income also contributed to spending of roughly 15 cents per capita on automobiles. The one major disappointment is that

the grant spending did not lead to spillover effects on employment in the private sector. This lack of increased private employment is consistent with the income multiplier of one, which suggests no spillover beyond the government spending (Fishback and Kachanovskaya 2015).

Public works and relief spending can account for about 15-20 percent of the increased in-migrations into the counties where the money was spent. Relief spending also had very powerful effects on public health. An additional 2 million in year 2000 dollars in relief spending in a city was associated with one less infant death, 2.5 fewer deaths from infectious disease, one less suicide, and one less death from diarrheal disease. A 10 percent rise in relief spending also contributed to a one percent reduction in property crime. This effect was less powerful than a 10 percent increase in private employment, which was associated with a 10 percent reduction in crime.

The AAA Farm Program

During the Great Depression, farmers faced a 25 percent drop in the ratio of farm prices to nonfarm wholesale prices. The Agricultural Adjustment Act (AAA) of May 1933 sought to raise farm prices by paying farmers to take land out of production for several types of goods, including cotton, tobacco, corn, and wheat. The original program was largely financed through a tax on the processors that was declared unconstitutional in January 1936. A new version of the AAA was passed without the tax and based on funding for general revenues through a new Soil and Domestic Allotment Act of 1936.

Given that the programs were mostly voluntary, the AAA likely benefited the farm owners who accepted the production agreements. Large farms tended to receive an outsize share of the benefits. However, the AAA appears to have had adverse effect on the incomes of farm laborers, tenants, and sharecroppers because it led to declines in the demand for labor. Narratives and recent quantitative studies show that in cotton counties with more AAA cotton spending, the number of black and white croppers declined by similar amounts, while the number of black managing share tenants declined more sharply than the number of white share tenants (Briggs Depew, Fishback, and Paul Rhode 2013). Infant mortality rates, which tend to be highest among low-income people, were

higher for both blacks and whites in southern counties with more AAA spending. Studies of per capita income at the state level and retail sales and in-migration at the county level show slight negative effects of AAA spending, consistent with a view that the positive benefits to the recipients of AAA funds were offset by losses among other members of rural society (Fishback and Kachanovskaya 2015; Fishback, William Horrace, and Kantor 2005, 2006).

On the positive side, the AAA's stimulus of out-migration of low income croppers and workers from poor areas appears to have had the side benefit of reducing malaria death rates. Over the long term the AAA had the positive effect of preventing later recurrences of the Dust Bowl of the 1930s by encouraging the development of larger farms and the introduction of berms and better methods for preventing soil erosion (Zeynep Hansen and Gary Libecap 2004). The AAA also appears to have been associated with the diffusion of machinery, which may have increased output per acre, although it came at the expense of lost positions for farm workers (Fishback, Depew, Kantor, Rhode, and Todd Sorensen, 2017).

Old and New Research on the Distribution of New Deal Funds Across States

The development of public choice analysis led by James Buchanan and Gordon Tullock has led to an extensive body of research on the extent to which government programs serve the goals of politicians and interest groups, as well as—or in spite of—the public interest. The New Deal has received extensive attention because government expanded so rapidly in the course of the 1930s. In a Fireside Chat in 1933 Franklin Roosevelt announced that New Deal programs were designed to promote relief, recover, and reform—the so-called “three R’s” of the New Deal. Leonard Arrington (1970) pointed out that the amounts of New Deal grants per capita varied widely across the states. Gavin Wright (1974) developed a political economy model that articulated how incentives to attract Presidential votes would have influenced the distribution of funds by the national government. His empirical analysis showed that presidential swing voting and electoral votes per capita were important influences on the distribution across states. Don Reading (1973), John Wallis (1998),

Robert Fleck (2008), James Couch and William Shughart (1998), Shawn Kantor, John Wallis and I (2003), and several others have since performed a series of analyses of the determinants of the distribution of the New Deal funds across states and counties in the 1930s. The studies have found that the distribution of funds in one or more studies was significantly affected by proxies for the three R's, long standing support for the Democrats, swing voting, electoral votes per capita, powerful Congressmen, the state's own attitude, national government land ownership in the state, and other structural features of the economy. The results depend upon the specification and the setting.

The studies of New Deal spending as a whole tend to show that the decision makers paid attention to swing voting and Congressional strength, while providing some help on the three Rs. In the most recent paper on the aggregated 1933-1939 data for the states Robert Fleck (2008, 15, 19-20) shows that a regression with only land per capita, the per capita income drop from 1929 to 1932 and the level of per capita income in 1932 can explain 89 percent of the cross-state variation in per capita New Deal spending. More money was spent in areas with a larger income drop, more land per capita, and with lower levels of per capita income. Similarly, a regression with just electoral votes per capita and the swing voting measure explains 78 percent of the variation, with positive coefficients for each variable. If the New Deal had followed a formula that used the regression coefficients from the first regression to distribute the money, the electoral vote and swing voting measures would have explained 85 percent of the formula-based hypothetical distribution. In essence, the federal government might have looked like it was practicing presidential politics even though it was following a formula based on income measures and land per capita. Successful politics went hand in hand with reform, recovery, and investing in improving land.

That is a valuable point, but it should not be overstated. When all five variables are included in the regression analysis, the coefficients of each are statistically significant and they each have sizeable economic magnitude. Thus, it appears that the New Deal was playing politics even after controlling for the economic structural measures.

Politicians often do not refer to the whole budget when they are describing how to deal with specific issues. Instead, they often talk about

their specific program. When the individual programs are studied, the three Rs become much more prominent in the relief programs, while swing voting and politicking still play a role. AAA funds went to areas with large farms and members of the Agriculture Committee in the House, while the Public Works funds tended to be freer from politics.

Valentina Kachanovskaya and I (2017) have new research in this area. For our 2015 multiplier paper we went back and reconstructed the state-level data described by the Office of Government Reports used by the scholars in this area from scratch for 1930 through 1940 because we found that some key features were missing. We now have extended the data on national government spending in the states back to 1923.

We then ask: Did the factors influencing the distribution of national government spending have different impacts under the Republican presidents than under Democratic President Roosevelt's New Deal? Part of the project involves an analysis of the statutes that governed the distribution of funds. We find that Congress maintained tight control over the distribution of funds across states before 1932 either through specific rules based on population or land area, through matching requirements for the states, or by approving each individual project's expenditures directly. After Roosevelt was elected and the Democrats took control of Congress in 1933, they cited the emergency facing the economy and passed important new legislation in the first hundred days (and continued to do so for several years) that gave the executive branch more authority over the distribution of funds across areas. After October 1933 the executive branch had carte blanche to distribute funds to the states under the FERA and later the WPA. Matching requirements for the states were weakened for highway projects. Under the Social Security Act of 1935, Congress reduced executive authority by giving the states responsibility to set benefits for dependent children, the poor elderly, and the blind and limited the national government's role to providing matching grants. The federal government only provided administrative funds for the state run unemployment insurance programs.

Using Fleck's (2008) specification we ran the "horse race" analysis (politics versus economics) for the Roosevelt New Deal period fiscal years 1934 through 1939 and a separate analysis for the period 1929 to 1932 when Hoover was facing the Great Contraction emergency. As Rob found,

the swing voting measure had a strong positive and statistically significant effect during the period 1934-1939 and the shares of Federal land also had strong impact. For the earlier period federal land had a similar powerful effect on the per capita monies received by the states. On the other hand, the distribution of money was negatively related to the swing voting measures. When we break it down program by program, swing voting had the most powerful effect on FERA spending and CWA spending, programs where the executive branch were given a great deal of authority. There were also a couple of surprises. The swing voting effect on the WPA, over which the executive had a great deal of control, was positive and reasonably large, but not statistically significant. The biggest surprise arises in analyzing the Social Security programs for dependent children, the elderly, and the blind. Swing voting had a larger positive and statistically significant effect than the WPA even though the executive branch was just responding to the decisions of the states about benefits. In general, it looks like there was a major change between the two periods. When the executive branch gained a great deal of control over the distribution of funds during the Depression, the influence of swing voting rose substantially.

Did Access to FERA Relief Differ for Blacks and Whites?

During the 20th century the national government seems to have been less discriminatory than southern state and local governments in many ways. Therefore, we might expect that New Deal federal government programs were likely to provide more equal access for blacks and whites than the earlier state and local relief groups.¹ The Federal Works Agency (1940, p. 23), for example, argued that its programs—including the Public Works Administration, the Works Projects Administration, the Public Roads Administration, and the Public Buildings Administration—actively sought to ensure no racial discrimination in employment and in the

¹Some of the federal government's "race-blind" rules turned out to be discriminatory. The national pension system in the Social Security Act of 1935 excluded the workers in domestic service and agriculture and the self-employed, which meant that 65 percent of all black workers in 1930 were excluded, compared with 45 percent of native white workers and 37 percent of white workers (Richard Sterner 1943, 214-215).

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distribution of benefits. Although the national government may have attempted to create equal access to these programs based on race or socioeconomic status, its oversight was limited because nearly all of the programs were administered in conjunction with state and local authorities in some way.

Many of these governments in the South had developed policies that had significantly retarded black progress for decades. Racial differences in program participation may also have led to an unequal distribution of program funds. Blacks with limited education may have faced more obstacles in determining their eligibility for relief programs. In addition, past experiences with local public programs may have discouraged them from applying. Sterner (1943, 213–323) wrote an extensive study using state-level means and frequencies from a wide variety of surveys to develop a complex picture of the extent to which black families participated in New Deal relief programs. There were racial differences in the participation in New Deal programs that varied across programs, and varied from state to state (and probably from county to county) within most programs.

Sterner found from surveys in 1933 and 1935 that the share of the black population receiving relief was higher than the white share of the population in southern cities, but it was lower in southern rural areas. Black families seem to have fared the worst from the Aid to Dependent Children program, which was largely administered by state and local agencies. Sterner (1943, 282–286) found that the percentage of black children accepted for ADC in the late 1930s in nearly every southern state was smaller than the black percentage of children under age 16, even though black families were more likely to have low incomes. Meanwhile, ADC benefits per child recipient were lower for blacks than for whites in 11 of 24 states with more than 100,000 blacks, mostly in the South.

The national government had much weaker control over the distribution of funds within states under the Federal Emergency Relief Administration (FERA) than it did over the programs of the Federal Works Agency. The national government distributed grants to the states, and then the state and local governments determined how to distribute the funds within the states. FERA head Harry Hopkins became dissatisfied with this system and fought with several states about their internal distributions.

His only real options for changes in these cases were to either withdraw relief or to have the federal government take over administering relief. Hopkins' dissatisfaction was one of several reasons why the FERA was replaced by the WPA in 1935 as the primary source of relief (Wallis, Fishback, and Kantor 2008).

I am in the middle of an empirical project analyzing the differences in black and white access to New Deal programs. This study will employ county-level data on access to relief under FERA in October 1933 and the WPA in 1937, as well as individual-level data for the WPA in 1940 and analysis of access to Home Owners' Corporation Loans to Building and Loans where blacks had mortgages. In essence, I am following Sterner's path and applying modern econometric methods with additional data sources to more deeply investigate the factors that influenced racial differences in access to New Deal programs.

The FERA (1934) performed a survey of relief recipients in October 1933 and provided information on the number of households (and people) receiving FERA relief for whites and blacks in urban and rural areas at the county level. I matched this information to Census reports at the county level for black and white families as well as information on blacks and whites aggregated from the 1930 Integrated Public Use Microdata Sample (Steven Ruggles, et. al 2015). I eliminated counties from the sample with fewer than 50 blacks because I wanted to compare the treatment of blacks and whites in counties where both lived. For the sample, I then calculated means of the share of black families receiving benefits weighted by the number of black families and means for the white share weighted across counties by the number of white families. Below are some of my preliminary findings for access to relief using county data from the FERA in October 1933.

Urban Areas

As Sterner found, the share of black families receiving FERA aid in urban areas was substantially higher than the share of white families, 32 percent compared with 11 percent, a black-white gap of 21 percentage points. Of course, we have not yet taken into account the fact the racial differences in unemployment, income, and wealth. The mean unemployment rate for black urban heads of household in 1930 was 11.6

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percent compared with 8.7 percent for whites. The home ownership rates for black urban household heads was 22.9 compared with 41.5 for whites, and the black average IPUMS occupation score was 5.7 points lower, the share of black households with radios was 39.8 percent lower, and the share of black male headed households was 12.7 percent lower than for white households.

To examine the issue further, I ran separate regressions for blacks and whites and then performed an Oaxaca decomposition. Each equation includes the following race-specific information determined from the IPUMS for household heads: the unemployment rate, the share not in the labor force, the home ownership rate, the average occupational score, the share owning a radio, veterans' status, share in several age categories, for household heads, veterans' status, the age distribution, share with male heads, and the average number of people in the household. In addition, I included the percentage change in retail sales between 1929 and 1933 and an interaction between the unemployment rate and that percentage change to take into account changes since 1930. Finally, state fixed effects were incorporated into the analysis. This focuses the analysis even more on how local governments were treating blacks and whites.

The Oaxaca decompositions can be performed using the black regression coefficients or the white regression coefficient or other linear combinations of the two. Either way tells the same story. The differences in the mean characteristics explain only 16.5 or 22.8 percent of the 21 percentage point differential between the black and white shares of families receiving relief. Thus, most of the gap comes from differences in coefficients that imply that FERA state and local administrators gave blacks better access to FERA urban relief than whites after controlling for the correlates. This is a surprising finding given the negative attitudes toward blacks in many in many areas and the control of relief distribution by locals.² It is important to emphasize, that this is the difference in

² It is likely that there are some aspects of the social discriminatory environment that would have been correlated with both FERA relief and with the correlates. Consider potential bias in the unemployment coefficient in the black regression. In an area with a more discriminatory environment that is unmeasured, we might expect that black unemployment was positively correlated with that unmeasured aspect at the same time it was negatively correlated with the

whether families received any benefit at all. We still need to investigate differences in the benefits paid to black and white families in more depth. I will be exploring that issue further using data from the 1940 census for relief workers.

Rural Areas

Using the weighted means from the counties with 50 or more blacks, the share of black families receiving FERA aid in October 1933 was 12.1 percent, slightly higher than the 11.8 percent of white families receiving aid. This slight favoritism would seem to be more than offset by the lower economic status of blacks at the time. The home ownership rates for black rural household heads was 22.6 compared with 49 for whites; the black average IPUMS occupation score was 3.6 points lower, the share of black households with radios was 23 percent lower, and the share of black male headed households was 6.8 percent lower than for white households. The one contrast with urban households was that the rural 1930 unemployment rate for black household heads was lower than for whites, 3.1 compared with 4.7 percent.

The Oaxaca decomposition provides mixed results about whether rural blacks were favored over rural whites in the receipt of relief after incorporating controls. When using the black coefficients to calculate the impact of the difference in black-white mean characteristics, the results suggest that blacks were slightly favored in the distribution of relief. When the white coefficients are used instead, it appears that whites were slightly favored more. Here again we do not have information on the dollar amount of aid given to each black and white family, so it is still possible that there may have been differences in the per family amounts given to blacks and whites.

Sterner noted that there were substantial differences in treatment by state. We are able to see that by looking at the difference in the black and

FERA distribution to blacks. These correlations would lead to a negative bias in the coefficient on black unemployment in the black relief regression. In the white regression white unemployment likely was negative correlated with the unmeasured discrimination while white relief would have been positively correlated, implying another negative bias to the white unemployment coefficient. It is unclear which downward bias would be larger.

the white state fixed effects. Urban blacks received the most FERA relief access relative to whites in Florida, Wisconsin, Delaware, South Carolina, and Louisiana. They had the least access relative to whites in Wyoming, Connecticut, New Mexico, Nevada, Maine, and Utah—states with small black populations. In rural areas blacks received relatively more access than whites in Illinois, Arizona, Pennsylvania, West Virginia, Kentucky, and Iowa, and the least in Massachusetts, Washington, New Hampshire, Iowa, and Colorado.

New Deal Spending, Shifting Implicit Wage Minimums, and Labor Markets

One of the most unsettled issues in studying the New Deal is how to deal with labor markets whereby unemployment rates exceeded 14 percent from 1931 through 1940, were over 20 percent between 1932 and 1935. These figures include people on work relief after 1930, yet excluding them from the unemployed leaves rates ranging from 9.1 to 22.5 over the same period (Michael Darby, 1976). In the context of a labor supply and demand model, such high unemployment implied that some factors were holding the hourly wage paid by employers well above the market-clearing equilibrium. The potential sources of these implicit minimums include Hoover's jawboning of large manufacturers, the implicit wage minimums created by the President's Reemployment Agreement (PRA) in 1933, and the codes of fair competition negotiated by the National Recovery Administration (NRA) between late 1933 and 1935, then the upward pressure from collective bargaining under the National Labor Relations Act (NLRA) and finally the minimum wage of 25 cents an hour set by the Fair Labor Standards Act (FLSA) of 1938.³

Yet, we do not fully understand how these upward pressures on wages worked and how widespread they were. Jonathan Rose (2010) documents the limited number of manufacturers who participated in Hoover's jawboning conferences. Jason Taylor (2011 and forthcoming) has explored the impact of the PRA and NRA codes on wages and hours and

³Harold Cole and Lee Ohanian (2004) and Gauti Eggertsson (2012) have developed structural macroeconomic models based on an implicit wage floor associated with the NRA. Cole and Ohanian (2004) also suggested that wages were held higher by the NLRA and the FLSA.

employment with an industry-level panel. Was there inertia that held wages up after the NRA was declared unconstitutional? It is hard to tell when the collective bargaining environment changed because of the uncertainties about how the Supreme Court would rule on the constitutionality NLRA. Even then, the employment covered by unions was largely found in industrial, construction, and transportation employment and only indirectly influenced other sectors. There was a large surge in strikes and collective bargaining in spring 1937 after the Supreme Court ruled in favor of the NLRA. Andrew Seltzer (1997) shows that the national minimum wage under the FLSA was binding primarily in southern industry and even there it was routinely circumvented.⁴ Finally, the introduction of the federal work relief and direct relief programs also influenced the labor markets to the extent that workers reduced their quantity of labor supplied at each wage.

Over the past couple of years Michelle Liu and I have been estimating the impact of the Great Contraction of 1929-1933, the Second Dip Recession of 1937-1938, and the impact of New Deal programs during the 1930s on earnings, employment, work hours, and the maintenance of skills in 1939-1940 (Xing Liu and Fishback, 2017). In thinking about how the New Deal impacted things, we have drawn some insights from looking at a simple labor demand and supply model with an implicit wage minimum. The twist we have added is in discussing what happens when the implicit minimum itself is influenced by the program change.

Table 1 shows the differences in predictions from shifts in supply and demand in an equilibrium model, a model with an implicit wage floor, and a model with a shifting wage floor. Figure 1 shows a labor supply and demand model.

⁴ There is also the issue raised about Hoover's jawboning, the PRA, and the NRA codes by Todd Neumann, Taylor, and Fishback (2013) about the implicit wage minimum as the only constraint. Based on narrative evidence they argue that the policies promoted "job sharing" in which weekly hours were cut from the low 40s to 35 per week, employment was expected to increase, and hourly wages were to hold constant or even rise to offset the drop in weekly earnings associated with the hours drop.

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Table 1

Predictions for Hourly Earnings and Total Hours Worked in Private
Employment Associated with Changes in New Deal Grants Under Different
Models of the Labor Market

	Hourly Earnings	Total Hours
<i>Equilibrium Supply and Demand:</i>		
Demand Rise	Rise	Rise
Demand Fall	Fall	Fall
Supply Fall	Rise	Fall
Supply Rise	Fall	Rise
<i>Fixed Implicit Wage Minimum:</i>		
Demand Rise	Same	Rise
Demand Fall	Same	Fall
Supply Fall	Same	Same
Supply Rise	Same	Same
<i>Implicit Wage Minimum Changes in the Same Direction as Wages Change from Change in Demand or Supply:</i>		
Demand Rise	Rise	Uncertain
Demand Fall	Fall	Uncertain
Supply Fall	Rise	Fall
Supply Rise	Fall	Rise
<i>Implicit Wage Minimum Changes in the Opposite Direction as Wages Changes from Change in Demand or Supply:</i>		
Demand Rise	Fall	Rise
Demand Fall	Rise	Fall
Supply Fall	Fall	Rise
Supply Rise	Rise	Fall

Notes: All changes are assumed to still result in a disequilibrium with high unemployment to match with the situation in the 1930s.

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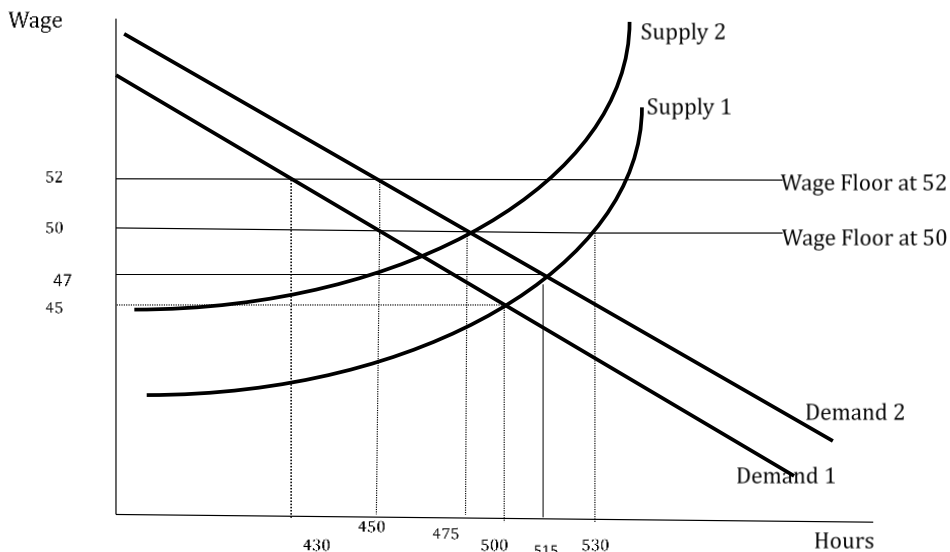


Figure 1

Changes in Wage Rates and Employment with Shifts in Demand or Changes in Implicit Wage Floor in a Wage Floor Model

Consider what happens if New Deal public works and relief spending stimulated the economy and thus cause the demand for labor to rise from Demand 1 to Demand 2. The equilibrium with no floor in Figure 1 implies a wage rise from 45 to 47 and an increase in total hours from 500 to 515. Say instead we start with an implicit “floor” of 50 that prevented the wage from falling to 45. That wage floor implies work hours of 450. When demand rises from Demand 1 to Demand 2 with the fixed floor at 50, the wage does not change, but hours rise from 450 to 500. In general, comparisons in Table 1 show that the predictions for shifts in demand and supply in the equilibrium model in the top of the table are muted for the fixed wage floor settings in the second grouping in the table. For a reduction in labor supply from Supply 1 to Supply 2 to influence employment in the fixed wage floor model, the labor supply would have to shift left far enough to reduce hours worked below 450 and even then it would not affect the wage.

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The major problem here is that we do not understand much about how the implicit wage floor was determined. Changes in New Deal spending on public works and relief might have moved not only labor demand and/or supply but also changed the implicit wage floor itself. For example, productivity improvements associated with public works and relief might have increased labor demand from Demand 1 to Demand 2 while also pushing the wage floor up from 50 to 52. The net results in Figure 1 would have been a wage rise from 50 to 52 but no change in hours, which remain at 450. In general, the change in hours will be uncertain. If demand shifts out faster than the wage floor rises, the hourly wage would rise to 52 and hours would rise; if the wage floor rose more than demand rose, the hourly wage would rise to 52 but hours would fall.

Similarly, if access to relief also gave potential workers an outside option that reduced labor supply, the implicit wage floor might also have risen. In this case, the wage would rise to 52 and total hours would fall from 450 to 430 (or lower if there was an extreme leftward shift supply).

The implicit wage floor analysis implies that an expansion of labor supply would have had no impact on wages or time worked because the wage and hours were determined by the combination of the wage floor and labor demand. There would have been an exception if the factors that caused a rise in labor supply also lowered the wage floor. In Figure 1, this can be shown by a reduction in the implicit wage floor from 52 to 50, which would have led to a reduction in the wage from 52 to 50 and an increase in total hours along the demand curve from 430 to 450. Note that the labor supply shift still has no effect on the wage or time worked.

At the bottom of Table 1 situations are listed whereby the wage floor moves in the direction opposite from what would be normally expected with a demand or supply shift. For example, say the factors causing a demand rise also contributed to a reduction in the wage floor. In this case, hours would rise but wages would fall.

With the possibility that wage floors shifting along with supply and demand, there are a profusion of new possible outcomes that are predicted in Table 1. Some of these predictions look substantially different from the predictions of the unconstrained equilibrium supply and demand analysis at the top of the table. The lesson here is that we really need to understand better the institutional features that seem to have created frictions in the

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labor market that contributed to the large amounts of unemployment. Those institutional features themselves will help researchers better determine what to expect with New Deal policy changes. Taylor (forthcoming) has gotten this started in a forthcoming book in which he digs deeply into the narrative sources surrounding the PRA and the NRA.

Conclusions

I consider it a great honor to be the keynote speaker at the Economic and Business History Society meetings. Even though I have worked with a number of scholars to study the New Deal with quantitative methods at the state and local level, you can clearly see that there is plenty more research that needs to be done. The New Deal involved a wide range of programs that have still not received much attention, and the high unemployment rates mean that we need to develop better understanding of the institutional features that contributed to disequilibrium and improve our models that predict what to expect in those contexts.

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