

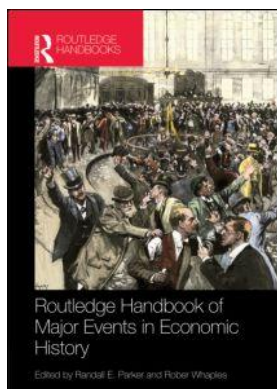
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14

THE MICROECONOMICS OF THE NEW DEAL DURING THE GREAT DEPRESSION

Price V. Fishback

Franklin Roosevelt's New Deal was the largest peace-time expansion in the federal government's role in the economy in American history. It was initiated after four years of economic devastation. By the beginning of 1933 unemployment rates had risen to nearly 25 percent of the labor force and annual real GDP had fallen to 30 percent of the 1929 level. Within the next six years, government spending as a share of GDP rose by nearly 5 percent.

So many people faced so many different types of troubles that Roosevelt and the newly elected Democratic Congress enacted policy changes in dozens of areas. If there was a unifying theme among the policies, it might have been to raise prices and wages in the face of the deflation that the economy had experienced. Yet, this theme covered only a few of the policies. A better description of the thinking was: "See a problem, develop a policy to try and fix it." People have lost their jobs: provide cash, food, and clothing to families and/or work relief jobs with subsistence earnings, build public works while paying full wages and seek to stimulate the economy while improving social overhead capital. Homeowners are losing their homes in foreclosure: purchase the troubled mortgages and refinance them. People don't trust the financial sector: regulate stocks, banks, savings and loans, and other financial institutions in new ways and create agencies to provide insurance against losses of deposits or on housing loans. Businesses and workers are facing problems across industries: allow employers, workers, and consumers in each industry to meet and set prices, wages, and quality of goods. Farm incomes have dropped: pay farmers to take land out of production and provide them with a variety of loans to help hold prices up and give them low-interest loans. Wages are too low: give unions the right to collective bargaining and establish minimum wages. The problems and responses ranged across nearly every aspect and sector of the economy.

Most New Deal policies were designed to achieve specific goals that were microeconomic in nature. For the past two decades scholars have been using modern quantitative methods to examine the impact of the various New Deal policies in local areas and for specific sectors of the economy. Because there were so many policy changes, the quantitative research has only begun to dig below the surface. This chapter summarizes the research findings related to the distribution of New Deal funds across areas and then describes the results of studies examining the impact of the following New Deal programs: relief and public works spending, farm programs, housing loans, and the National Recovery Administration.

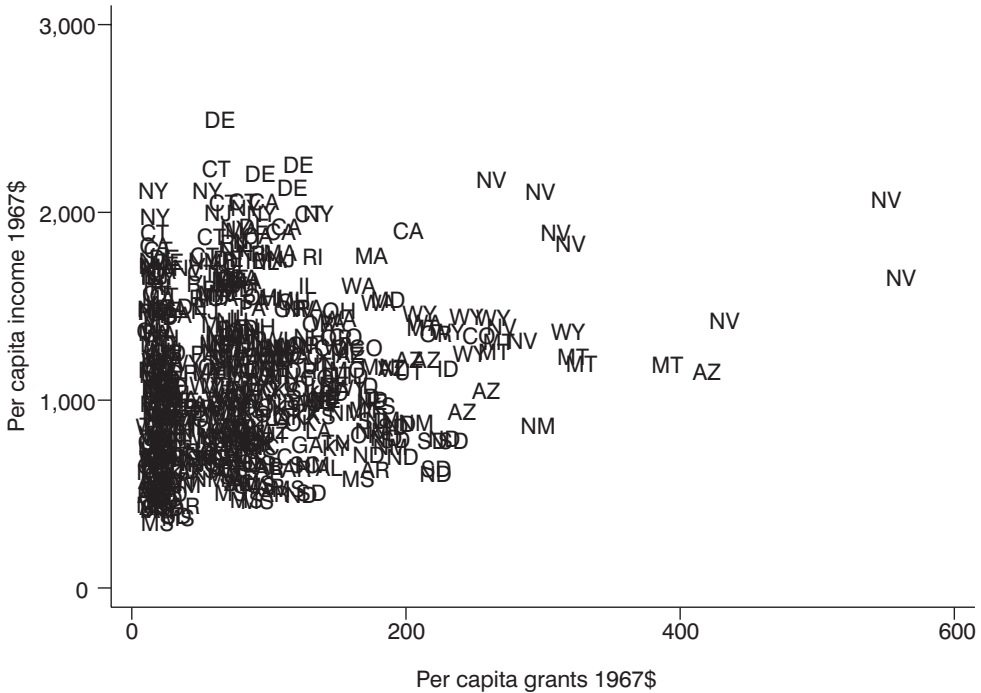


Figure 14.1 Per capita personal income and per capita federal grants in the state in 1967 dollars, 1930–40

Source: Fishback and Kachanovskaya (2011)

The distribution of New Deal funds across the country

The geographic distribution of New Deal funds has received the most attention in microeconomic studies of the New Deal. Leonard Arrington (1970) pointed out that per capita spending on New Deal programs varied dramatically across the states, as seen in Figure 14.1. Since then a cottage industry has produced a large number of publications seeking to explain the reasons why. The debate has centered on the extent to which the Roosevelt Administration followed their announcements that they had sought to promote “Relief, Recovery, and Reform,” (the three Rs) or instead followed the more cynical aim of using government programs to build patronage and to “buy” voters to ensure the continuation of the Democrats’ control of the presidency and the Congress.¹

Nearly four decades of study shows that both sets of factors were important, although different study specifications give different weights to each factor. Most studies find evidence that the funds were distributed to some degree in the ways suggested by the rhetoric of the Roosevelt Administration. There are some signs that *total* spending was higher in areas with more economic problems. When the focus shifts to relief programs that explicitly focused on the poor, the signs of higher spending in areas with higher unemployment, more of an output drop, and lower long-term incomes are much stronger. Analysis by program suggests that many of the housing programs, like the Home Owners’ Loan Corporation (HOLC) and the Federal Housing Administration (FHA) benefited higher income people, while many of the farm programs benefited large farmers.

Every study shows that politics mattered, particularly swing voting and higher voter turnout. Areas that had long supported Democrats fared well in some programs but not in

others. Key Congressional leaders and members of key Congressional committees apparently were successful at “bringing home the bacon” to their constituents. Meanwhile, more federal relief spending was distributed in the months just prior to key national elections than in other years and at other times within the election years. The attitudes of state and local leaders and their administrative skills also determined the distribution. Some federal programs involved matching grants, while others required local governments to come up with projects to be funded.

In the final analysis further attempts to assign more exact weights to the three Rs and presidential politicking may be fruitless. Our measures of each are inexact at best, and we really have no metric for what was the “right” amount. Typically the most we can say is that a specific factor had an impact with only a rough idea of the weight. Further, good politics requires more than just strategic manipulation. Failure to deliver on at least some of the promises in the rhetoric would likely cause losses in the next election. Sorting out the differences is made more difficult by the great deal of overlap between the states that had high values for swing voting and presidential politicking and the states where economic problems were greatest (Fleck 2008).

The local impact of New Deal programs

Over the past two decades there has been increasing interest in measuring the impact of the New Deal at the local level. The wide range in per capita incomes and New Deal spending across the country illustrated in Figure 14.1 is similar to the range for a variety of New Deal programs and socio-economic outcomes. Scholars have therefore developed cross-sectional data and panel data sets for cities, counties, and states, as well as pseudo panels for individual census data from the Integrated Public Use Micro Series (IPUMS) to analyze the effects of the New Deal. All of the studies use multivariate analysis to control for correlates. The ones with panel data also use year fixed effects to control for factors that influenced all areas in each time period but varied over time, and area fixed effects for time-invariant features in the areas that varied from place to place. In situations where there are fears of endogeneity bias, a number of studies have explored the use of instrumental variables.

The impact of all federal grants on state economic activity

Macroeconomists have not spent much time focusing on the effects of fiscal stimulus in the Great Depression at the national level because it is generally agreed that the Roosevelt Administration did not try to run a Keynesian policy. The federal deficit remained small relative to the size of the problem in large part because tax revenues rose at roughly the same rate as federal distributions (Brown 1956, Peppers 1973, Fishback 2010). There are opportunities to examine the impact of differences in fiscal stimulus at the state level because Figure 14.1 shows that there was enormous variation in the per capita federal grants awarded and the per capita incomes in each state over the course of the 1930s. The figure also shows that there does not appear to be a strong positive relationship between per capita federal grants and per capita incomes in the raw data. The negative endogeneity bias from the Roosevelt Administration’s attempts to offset downturns with more grant spending may well have worked against the expected positive benefits from the spending.

Regional models across the spectrum predict a positive relationship between per capita income and injections of spending in the form of multipliers. The area multipliers for injections of federal spending in regional models are driven by a variety of factors. A

multiplier of one occurs when the spending feeds directly into state income such that a dollar per capita of federal spending raises income per capita by a dollar. The multiplier can grow larger than one if the grant spending not only employs workers in projects that would not have been built otherwise but also makes the private sector more productive or leads to spending that rolls over through the economy. Crowding out of private activity, like building an electric plant that would have been built by a private company, can lead to multipliers much less than one.

Since each local area was part of a larger economy, the impact of spending on income in the area receiving the funds was weakened to the extent that the grant money went to purchasing goods and services from other areas. Work relief grants suffered least from these leakages because over 80 percent of the money was spent on relief wages. The effects of federal injections were weakened further when local consumers purchased goods and services from other areas and when federal tax rates bit into the amount they had available to spend. Fishback, Horrace, and Kantor (2004, appendix) estimated in a simple regional federal model that if 80 percent of the grant was spent on wages, 80 percent of consumption was within the state, there was a 30 percent boost in productivity as a result of the grant, and the federal tax rate was about 7 percent, the multiplier of an additional dollar of per capita federal spending could exceed 2. However, if buyers imported 50 percent of their purchases, there was no productivity boost and no crowding out, and the other assumptions remained the same, the multiplier would be only 0.85. If there was crowding out of private activity or employment, the coefficient would be smaller still. It is true that each area can benefit from federal injections in other areas that purchase goods and services from them, but they get those benefits whether the federal government spends in that area or not. Thus, these multipliers give a sense of the benefit to local areas for lobbying for federal injections.

Fishback and Kachanovskaya (2011) develop a state panel data set with information on each year from 1930 to 1940 for various measures of economic activity and a variety of measures of federal government spending. In the process they control for changes in weather and year and state fixed effects, and they explore the use of state-specific time trends and a variety of instrumental variables. Their estimates suggest that the personal income multiplier from overall federal grant spending (and other broader measures) was roughly one. There was a stronger relative effect on retail spending and on purchases of automobiles. However, they do not find that the federal grants led to increases in private employment.

Relief and public works programs

The New Deal greatly expanded the value of grants and loans distributed by the federal government for the building of roads, dams, flood control, irrigation projects, federal buildings, and other national government public works. The projects simultaneously built new social overhead capital and also provided employment at full market wages for a significant number of skilled and unskilled workers through the normal contracting procedures. These projects accounted for about 20 percent of the total grants during the New Deal period listed in Table 14.1.

The lion's share of New Deal spending (roughly 62 percent) went to the federal government's new role as an emergency provider of relief for the unemployed and the poor through programs like the Federal Emergency Relief Administration (FERA), the Works Progress Administration (WPA) and the Social Security Public Assistance (SSPA) programs. The WPA and FERA programs were relief programs designed to replace incomes up to a very basic standard of living that was roughly 65 to 75 percent of the budget that social workers

considered to be a maintenance budget for a manual worker (Stecker 1937: 5). Thus, for work relief jobs they limited working hours and paid hourly wages that were about half of the wages paid on public works projects. The Social Security Act of 1935 provided for federal matching grants to the states to provide aid to dependent children, the blind, and the poor elderly to help aid the poor once the states structured their existing programs or added new programs to meet the federal requirements.

The public works and relief spending tended to have stronger effects on state per capita personal incomes than overall spending. In Fishback and Kachanovskaya (2011), the point estimates for the multipliers are between 0.9 and 1.8, although the hypothesis of a multiplier of 1 cannot be rejected. In studies of counties during the 1930s, Fishback, Horrace, and Kantor (2005, 2006) find that an additional dollar of public works and relief spending over the course of the 1930s raised retail sales per capita in 1939 by 40 to 50 cents, while also stimulating in-migration into the county despite efforts by state and local officials to restrict access to relief to migrants.

The Tennessee Valley Authority, a government-sponsored corporation, developed a series of dams for flood control and electricity along the Tennessee River, which runs through Tennessee, Alabama, and slivers of Mississippi and Kentucky. Aside from the stimulus of the building projects, the TVA had the potential to lead to major long-run improvements in standards of living in the areas where it operated. Although many people have presumed that the TVA charged lower electric rates than the other utilities in the South, comparisons of the monthly bills for the vast majority of electricity consumers show no difference in the amounts paid per month. Comparisons of counties with and without access to TVA electricity show very little difference in the electrification of farms or in the growth of retail sales (Kitchens 2011a). The TVA dams did much to improve flood control in the southeast along multiple rivers but they had the unfortunate side effect of increasing problems with malaria because they created long coastlines with standing water in the areas that were flooded, which supported more mosquitoes. The TVA tried to change water levels, spread oil on the water, and use other methods to prevent mosquito hatches, but the efforts could not fully counteract the increase in mosquito activity (Kitchens 2011b).

Relief spending had a variety of salutary effects on a number of dimensions in American cities. By building public health facilities and providing funds and in-kind benefits to the poor and unemployed, families were better able to stave off disease. Using a panel of 114 cities from 1929 to 1940, Fishback, Haines, and Kantor (2007) find that about \$2 million (in 2000\$) in additional relief spending was associated with the reduction of one infant death, half a homicide, one suicide, 2.4 deaths from infectious disease, and one death from diarrhea in large urban areas between 1929 and 1940. The relief spending also gave young people enough income to return to normal fertility patterns.

Relief spending also struck at the roots of crime. Work relief had particularly strong effects because it replaced lost income and also occupied a significant amount of the recipient's time. In a city panel study of the 1930s, Johnson, Kantor, and Fishback (2010) find that a 10 percent increase in spending on work relief was associated with a 1.5 percent reduction in property crime. The relief spending was not as successful as private employment in reducing property crime; they also find that a 10 percent rise in employment in a city was associated with a 10 percent fall in property crime rates in the 1930s.

The one disappointing feature of the public works and work relief programs was that they did not appear to provide enough stimulus to generate a rise in private employment. A rise in public works spending that employed workers at full wages was likely to raise the number of government workers, but it would only increase private employment if there

Table 14.1 Total and per capita federal spending by program in millions of contemporary dollars for the period July 1, 1932 through June 30, 1939

	<i>Acronym</i>	<i>Amounts from July 1, 1932 to June 30, 1939 (Millions \$)</i>	<i>Per Capita</i>	<i>Category</i>	<i>First Fiscal Year with Significant Spending</i>
Total Taxes Collected From States		26,061	213.11		
<i>Nonrepayable Grants</i>					
Works Progress Administration	WPA	6,844	55.97	Work Relief	1936
Veterans' Administration	VA	3,955	32.34	Relief	Pre 1933
Federal Emergency Relief Administration	FERA	3,059	25.02	Relief and Work Relief	1934
Agricultural Adjustment Administration	AAA	2,863	23.41	Agriculture	1934
Civilian Conservation Corps	CCC	2,130	17.42	Work Relief	1934
Public Roads Administration	PRA	1,613	13.19	Public Works	Pre 1933
Rivers and Harbors and Flood Control	RHFC	1,316	10.76	Public Works	Pre 1933
Public Works Administration – Nonfederal Projects	PWANF	1,032	8.44	Public Works	1934
Civil Works Administration	CWA	807	6.60	Relief/Public Works	1934
Social Security Act	SSA	759	6.21	Relief	1936
Public Works Administration – Federal Projects	PWAF	632	5.16	Public Works	1934
Balance from Relief Acts	BRA	376	3.08	Relief	1936
Public Buildings Administration	PBA	324	2.65	Public Works	Pre 1933
Bureau of Reclamation	BR	290	2.37	Public Works	1934
Farm Security Administration	FSA	273	2.24	Agriculture	1936
National Guard	NG	219	1.79	Military	Pre 1933
Public Works Administration – Housing Projects	PWAH	129	1.05	Public Works	1935
Nonrepayable Grants Total		27,180	222.26		
<i>Repayable Loans</i>					
Reconstruction Finance Corporation	RFC	4,782	39.11	All	1932
Farm Credit Administration	FCA	3,957	32.35	Agriculture	Pre 1933
Home Owners' Loan Corporation	HOLC	3,158	25.83	Home Finance	1934
Commodity Credit Corporation	CCC	1,186	9.70	Agriculture	1934
Public Works Administration	PWA	508	4.15	Public Works	1934

	<i>Acronym</i>	<i>Amounts from July 1, 1932 to June 30, 1939 (Millions \$)</i>	<i>Per Capita</i>	<i>Category</i>	<i>First Fiscal Year with Significant Spending</i>
Farm Security Administration	FSA	337	2.76	Agriculture	1934
Home Owners' Loan Corporation and Treasury Investments in Bldg. and Savings and Loans Associations	HOLCT	266	2.17	Home Finance	1934
Federal Reserve Banks	FRB	125	1.02	Finance	1935
Rural Electrification Administration	REA	123	1.01	Agriculture	1936
Total Repayable		14,549	118.97		
Value of Loans Insured by Federal Housing Administration					
Title I – Refurbishing and Maintenance Loans		834	6.82	Home Finance	1936
Title II – Home Mortgages.		1,855	15.17	Home Finance	1936
Total Housing Loans Insured		2,689	21.99		

Source: Fishback and Kachanovskaya (2011). Categories included in grant totals but not listed include the Soil Conservation Service with \$0.82 per capita, Agricultural Extension Work with \$0.77, Vocational Education at \$0.74, U.S. Employment Service at \$0.65, Indian Service within the Civilian Conservation Corps at \$0.42; Agricultural Experiment Stations at \$0.29, Forest Service Roads at \$0.28, Colleges of Agriculture and Mechanical Arts at \$0.19, Forest Funds at \$0.14, Mineral Lease Payments at \$0.09, Land Utilization Programs at \$0.09, Soldiers' and Sailors' Homes at \$0.03, Special Funds at \$0.02, Office of Education at \$0.02, State Marine Schools at \$0.01, Books for the Blind and Federal Water Project Payments. Categories included in Loan Totals but not listed include U.S. Housing Authority with \$0.45 per capita, Farm Tenant Purchases with \$0.27, and the Disaster Loan Corporation with \$0.14.

were spillover increases in labor demand in the private sector. This effect was weakened and private employment could even fall if the presence of public works or work relief jobs created disincentives for workers to accept private employment, which in turn would drive up the wage for employers trying to attract workers. Both the positive and negative effects of work relief were weaker because it paid lower hourly earnings. During the 1930s some employers complained that work relief was creating disincentives for workers to accept private employment. In fact, a sizeable number of potential workers stayed on WPA projects for several years because they feared that the private jobs might last only a short period of time and they would have trouble returning to work relief (Margo 1993, Howard 1943).

A series of panel studies of local labor markets in the 1930s generally find no positive relationship between relief spending and private employment.² In the early years of the decade when unemployment was at its peak above 20 percent, Benjamin and Matthews (1992) find that the addition of one work relief job reduced private employment by about one-third of a job, while Neumann, Fishback, and Kantor (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. Fishback and Kachanovskaya's (2011) panel study of state multipliers finds small negative and statistically insignificant effects of overall spending and public works and relief spending on private employment.

One of the primary forms of direct relief was the development of old-age assistance, designed to allow the poor elderly to have enough income to remain in their homes. Over half the states had created some form of old age assistance by the time the Social Security Act of 1935 created matching grants to induce all states to improve or establish new programs. Higher benefits under the federal matching grant version of old-age assistance established under the Social Security framework after 1935 allowed more elderly men to retire from their jobs and more widowed women to live on their own (Costa 1999, Friedberg 1999, and Parsons 1991). Although death rates for the elderly fell after the introduction of Old Age Assistance (OAA) in each state, they also fell for other age groups at those same times. Thus, it does not appear that OAA was a causal factor lowering the elderly death rate in the 1930s. However, once penicillin and other drugs were created in the 1940s, increases in OAA benefits did appear to lower mortality rates (Stoian and Fishback 2010, Balan-Cohen 2008).

Farm programs

The shakeout after the rapid expansion in farm production during World War I had led to problems in the farm sector throughout the 1920s. The situation grew worse after 1929. The Roosevelt Administration sought to raise farm incomes by raising prices and to aid farmers through an expansion of their loan programs. The centerpiece of the New Deal program was the rental and benefit program administered by the Agricultural Adjustment Administration (AAA). The AAA, both before and after the initial version was declared unconstitutional, paid farmers to take land out of production in an attempt to limit output and raise prices. Meanwhile, the Farm Credit Administration (FCA) took over and expanded earlier mortgage programs, raising the federal government's share of mortgages from about 14 percent to roughly half of all farm mortgages. The FCA also offered crop and production loans and emergency loans. The Commodity Credit Corporation (CCC) made loans that were designed to put a floor on the prices received by farmers for their crops. The AAA and most loan programs ended up providing most of the aid to larger farmers. Meanwhile, the FERA provided relief aid to low-income farmers in programs later transferred to the Farm Security Administration, and the Resettlement Administration moved some farmers to better land. Loans and grants from other programs were provided to aid small family farms (Halcrow 1953, Alston and Ferrie 1999).

The original AAA program was meant to pay all types of farm operators, including cash and share tenants, who rented land by making cash and crop share payments to the farm owner. The situation for share croppers, who had labor contracts that paid them a share of the crop, was more tenuous, although the AAA administrators claimed that no one should be displaced by the payments and in fact claimed that there had been no displacement by 1935. Yet, many narratives suggest that in actual operation a number of share tenants and sharecroppers did not receive benefits from the AAA. The payments to take land out of production of the AAA crops also likely reduced the demand for labor because the land was either fallowed or shifted to less labor-intensive non-AAA crops. Thus, AAA recipients received a net benefit of the difference between the AAA payment and what they would have earned from the output had the land been used in that crop plus whatever benefits were gained from the alternative use of the land. Meanwhile, cuts in the demand for labor potentially led to lower earnings

and fewer opportunities for farm laborers and sharecroppers and even tenants (Alston and Ferrie 1999, Biles 1994, Depew, Fishback, and Rhode 2012, Whatley 1983).

The findings from a variety of studies are consistent with a situation where the gains to AAA benefit recipients were offset by losses to farm workers, croppers and possibly tenants. Fishback, Horrace, and Kantor (2005, 2006) find that counties with more AAA spending per capita experienced slightly lower growth rates in retail sales and experienced more out-migration in the 1930s. In the state panel study by Fishback and Kachanovskaya (2011), increases in AAA spending had negative but statistically insignificant effects on per capita state incomes. Depew, Fishback, and Rhode (2012) find that increases in AAA cotton payments in 1933 and 1934 in the cotton counties were associated with declines in the number of managing share tenants and declines in the number of sharecroppers. The declines in the number of black and white croppers were similar in size, but the declines in the number of black managing share tenants were substantially larger than the declines in the number of white managing share tenants. Studies of the diffusion of tractors suggest that the AAA payments and farm loans stimulated the use of tractors, which in turn might have contributed to more replacement of labor in the South (Clarke 1994, Sorensen, Fishback, Kantor, and Rhode 2011, Whatley 1983).

The AAA programs' spillover effects on the health of the farm population in the South varied. Fishback, Haines, and Kantor (2001) find that areas with higher AAA spending were associated with higher infant mortality for both black and white families, with more damage for blacks than whites. On the other hand, the AAA's stimulus of out-migration of low income croppers and workers from poor areas where malaria was more of a problem appears to have had the side benefit of reducing malaria death rates (Barreca, Fishback, and Kantor 2011).

Over the long term the AAA had the positive effect of preventing later recurrences of the Dust Bowl of the 1930s. Farmers originally settled the Dust Bowl areas under the Homestead Act's restrictions on farm size. They had little incentive to spend the time building berms and using other methods to prevent soil erosion on these small farms because most of the benefits accrued to neighboring farms. When high winds combined with drought in the 1930s, the loose soils created enormous dust clouds in Kansas, Colorado, Oklahoma, and Texas. The AAA, particularly the reformed version after 1935, encouraged the development of large farms and required farmers receiving benefits to use techniques that cut soil erosion. When the same mix of strong winds and terrible droughts hit the region again in the 1970s, no Dust Bowl developed (Hansen and Libecap 2004).

Refinancing nonfarm mortgages through the HOLC

Housing markets began falling apart in the late 1920s after a strong building boom. In the late 1920s most nonfarm homeowners were limited to borrowing only 40 to 60 percent of the value of their homes and they were generally good credit risks at the time they borrowed. The high unemployment of the Depression forced many into deep trouble. To combat the growing potential for foreclosures, the Roosevelt Administration established the Home Owners' Loan Corporation (HOLC). The corporation purchased roughly 10 percent of all U.S. nonfarm mortgages from lenders for a cost equal to about 5.7 percent of GDP and then turned around and refinanced the mortgages on generous terms. The typical borrower refinanced by the HOLC was in deep enough trouble that he had typically stopped making mortgage and tax payments 2.5 years before the HOLC purchased the loan.

The HOLC focused its publicity and reports on the relief provided to home owners, but it provided as much or more relief to the lenders. The HOLC served as a "bad bank" by purchasing toxic assets from the lenders with HOLC bonds guaranteed by the federal

government. To get lenders to participate, the HOLC gave them a good deal. In nearly half of the cases the lender received bond values that covered not only the principal owed on the loan but also all of the interest payments missed and any taxes on the home the lender had paid. In the rest of the cases the bond values fully covered the principal and taxes and most of the interest payments missed (Rose 2011).

The borrowers also received a good deal. Roughly half of the borrowers received small reductions in the interest they owed, but virtually no one received a reduction in the principal owed. The HOLC interest rate was 5 percent at a time when interest rates ranged from 6 to 8 percent across the country for high quality mortgages. The true subsidy was probably higher because the HOLC later foreclosed on 20 percent of the loans refinanced at a typical 30 percent loss. The HOLC also adopted a 15-year amortized loan that spread payments evenly across the life of the loan. These replaced loans that either required a large balloon payment of principal after five years or involved membership contracts with a building and loan association that contained a risk of increases in payments if other borrowers failed to make their membership payments.

How much did the program cost the taxpayer? An audit by the U.S. Comptroller General shows that the lending program lost roughly \$53 million, or 2 percent of the roughly \$3 billion total value of loans, after all costs of capital were considered in the government accounting process. This cost to the taxpayer understates the true subsidy to housing markets that arose from federal guarantees of the HOLC bonds that financed the program. Had the HOLC run such a risky program without the federal guarantee, the interest rate on HOLC bonds would likely have been at least one percent higher. Each one percent rise in the interest rate on the bonds would have raised the subsidy by roughly \$300 million, or 10 percent of the value of the loans refinanced (Fishback, Rose, and Snowden 2012).

Was the cost worth it? Two independent studies of county housing markets across the country find strong effects of HOLC loans in smaller counties. An increase in HOLC lending from zero to the average amount in these places staved off roughly 20 percent of the potential drop in housing prices from 1930 to 1940, and as much as 67 percent of the potential drop from 1934 to 1940. The change also contributed to raising the number of home owners by about 10 to 15 percent in these communities. Neither study finds much effect in larger cities, however, possibly because larger cities had better established networks of lenders who were more effective at protecting the group against failures. Nor did the studies find an increase in housing construction associated with the replacement of the toxic assets on the lenders' books.³

The National Recovery Administration

As the price level fell 30 percent between 1929 and 1933, many industry leaders complained of "cutthroat" competition that drove prices down and forced many firms to close. The Roosevelt Administration responded by establishing the National Recovery Administration (NRA), which was meant to foster the development of "fair codes of competition" in each industry. Industrialists, workers, and consumers in each industry met to establish rules for minimum prices, quality standards, trade practices, wages, hours limits, and working conditions. Once the code was approved by the NRA, it legally bound all firms in the industry, even those not involved in writing the code. While waiting for the codes to be written, a large number of firms signed President's Reemployment Agreements (PRAs) in the summer of 1933 that required them to raise wages without cutting the number of their employees. In many of the sectors the codes were largely written by the leaders of trade associations with

some influence by consumers, because relatively few industries had a strong union presence. Many small firms complained that the codes favored the large firms that were so prominent in writing them (Bellush 1975).

Economists bluntly describe the NRA codes as cartel arrangements with the federal government as enforcer because the industries were given anti-trust exemptions. Even with government's backing, industries with more diverse firms and products had trouble coming to agreement on the codes and then trying to enforce them (Alexander 1997, Klein and Taylor 2008). The successful cartels typically had more complex codes that established restrictions on capacity, production quotas, and provided for data collection for monitoring. The extent to which cartels raised prices and lowered output depended heavily on these rules (Klein and Taylor 2008, Taylor 2007, 2010). Most were relieved when the NRA was struck down as unconstitutional and did not press for an alternative policy (Alexander and Libecap 2000).

Cole and Ohanian (2004) develop a dynamic structural model of the economy to examine the impact of the NRA policies and later attempts to maintain wages by establishing a minimum wage and recognizing unions' rights to collective bargaining. They find that the policies played a major role in preventing the type of quick recovery in employment and output that typically follows sharp recessions. On the other hand, Eggertsson (2008) develops a similar model that examines the simultaneous effects of the NRA, the move off of the gold standard, and increases in deficit financing. Eggertsson argues that all three measures led to a sharp change in people's expectations of future price declines. In his counterfactual, output would have dropped further after 1933, and the NRA was one of the policies that contributed to an increase in output and a reduction of unemployment.

Taylor (2011) does not find nearly so dramatic effects when he examines the impact of the PRA and NRA on panels of monthly data from 1927 through 1937 for up to 66 industries. After controlling for industry fixed effects, a time trend, and macro policy, he shows that the number of workers employed and hourly wage rates were higher under the PRA and the NRA than in other periods, but these benefits were offset by reductions in average weekly hours that led to lower total hours worked and lower weekly earnings. Similarly, the introduction of the minimum wage under the Fair Labor Standard Acts did not have strong effects, in part because the minimum was below wages in most parts of the country. Where it was binding in the South, many firms exploited loopholes to get around it (Seltzer 1997).

Conclusion

The economic and quantitative analysis of the microeconomics of the New Deal is still in its infancy. A large number of policies have still not been studied carefully, and there are many other questions that still can be answered about the policies that have received emphasis here. Thus far, the quantitative analyses appear to suggest that the most successful programs for socio-economic welfare of the population were the public works and relief programs and the HOLC. The public works and relief programs appear to have raised incomes and consumption, although not with multipliers of 2 or 3 that are often used in consulting reports for stadiums and other infrastructure. They also helped reduce mortality on a variety of dimensions and contributed to lower crime rates. Outside of larger cities, the HOLC loan purchase and refinance program helped counteract the drops in housing prices and home ownership that people feared would continue throughout the 1930s, although the purchase of toxic assets from lenders does not seem to have stimulated building activity. The farm program helped large farm owners and those who were paid AAA benefits, but may have redistributed incomes in ways that harmed farm workers and farm laborers.

Notes

- 1 The discussion in this section is an overview of findings from Anderson and Tollison (1991), Arrington (1970), Couch and Shughart (1998), Fishback, Kantor, and Wallis (2003), Fleck (1999a, 1999c, 2001a, 2001b; 2008), Neumann, Fishback, and Kantor (2010), Stromberg (2004), Wallis (1984, 1985, 1987, 1991, 1998, 2001), and Wright (1974).
- 2 The emphasis here is on the panel studies. Wallis and Benjamin (1981) find no positive effects in a cross-sectional analysis, and Fleck (1999b) finds that a marginal relief job increased measured unemployment (which included relief workers) likely by attracting discouraged workers back into the labor force.
- 3 See Fishback et al. 2011, Courtemanche and Snowden 2011. For studies of other programs, see Kollmann and Fishback 2011).

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