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# EMPLOYMENT, POLITICS, AND ECONOMIC RECOVERY DURING THE GREAT DEPRESSION

# John Joseph Wallis\*

Abstract—In earlier studies, economic historians found that political goals, rather than social or humanitarian objectives, motivated much of New Deal spending. Using new information on annual, state level employment for the 1930s, this paper shows that, while politics are still important, responding to the needs of the unemployed was an important determinant of New Deal spending.

T.

Economics and politics have always attracted one another and no event so inextricably wed the two together as the Great Depression. Economic catastrophe set in motion the political events that created the New Deal; New Deal reforms reorganized and regulated the American economy; and since then the government's role in assuring the performance of that economy has become the dominant political issue of the century. This intimate relationship between politics and economics had particular interest for the Roosevelt administration. They had only to look at Herbert Hoover to see the political cost of appearing to do nothing to right the economy. Right or wrong, Roosevelt could not but act. There is, however, disagreement over who's interests were actually served by those actions.

Historians have vigorously debated whether the New Deal should be regarded as a rear guard action by a basically conservative Roosevelt administration (the revisionist view) or whether the New Deal moved as far as it could toward social reforms as the atmosphere of crisis created by the Depression would allow (the traditional view). Economic historians have, almost inadvertently, provided evidence that generally supports the revisionist view that political considerations, rather than a desire for social reform or to alleviate need, formed the basis for New Deal policy.

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<sup>1</sup> Two overall treatments of the New Deal, both the traditional and the revisionist, can be found in Graham (1971) and Sitkoff (1985). For more detailed criticism of the New Deal see Bernstein (1968), Zinn (1966), and Conkin (1967). The traditional view can be found in Schlesinger (1957, 1959, and 1960), Freidel (1973), and Degler (1959).

This conclusion was the result of a study of the large federal grants used to finance the New Deal's unemployment and agricultural relief programs. In 1927 non-military federal government expenditures accounted for 3.0% of GNP. By 1940 non-military federal expenditures were 8.5% of GNP.2 Such growth was unprecedented, indeed it is unique in American history. Moreover, between 1932 and 1940, 75% of the growth in non-military federal expenditures came in programs administered under "cooperative arrangements" with the states. These grant programs grew from \$250 million in 1932 to \$3,922 million in 1940. As table 1 shows, the distribution of these funds was by no means equal across the regions of the country.<sup>3</sup> Total per capita grants between 1933 and 1940 ranged from a high of \$1,155 in Nevada to a low of \$165 in North Carolina.

Noting the wide diversity of national grants to the states, Arrington (1969, 1970) began to investigate the sources of the differences, followed by Reading (1973), Wright (1974), and Wallis (1984a). Arrington was primarily concerned with the determinants of grants to agricultural states in the West and Midwest. Reading set out to test whether the stated New Deal goals of "relief, recovery, and reform" could adequately explain the New Deal allocation of funds among the states. He concluded that they could not. States with high unemployment and low incomes did not, in general, receive larger national grants. Wright extended Reading's work to include explicit measures of the "political profitability" of national grants to each state. Wright found that the New Deal consistently gave larger grants to politically sensitive swing states, where the switching of a small number of votes could make a difference in a presidential election. Including Wright's political variables also eliminated the last vestige of importance that Reading had found for relief, recovery, and reform as guides to New Deal policy. Wallis extended Wright to encompass the federal nature of the spending programs. States with higher incomes tended to spend more of their own funds on New Deal programs and they received larger matching federal grants, leading to the unexpected positive relationship between state income and national grants.

While the findings of Arrington, Reading, Wright, and Wallis do not, by themselves, settle the debate

<sup>&</sup>lt;sup>2</sup> U.S. Bureau of the Census (1975, pp. 1120-1134).

<sup>&</sup>lt;sup>3</sup> The data underlying table 1 were graciously supplied by Professor Wright, as well as additional variables used in his research. I am grateful for his generosity.

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TABLE 1.—NATIONAL GRANTS PER CAPITA

Region	
New England	221.30
Mid-Atlantic	208.50
East North Central	234.11
West North Central	373.07
South Atlantic	207.50
East South Central	233.38
West South Central	262.69
Mountain	628.34
Pacific	<b>34</b> 8. <b>8</b> 7
National Average	321.94

Source: Worksheets, Wright (1974).

between the historians, the results are suggestive. It appears as though politics was not only an important factor in New Deal spending, it may have been the overriding factor, overshadowing the stated goals of promoting economic recovery and alleviating the suffering of unemployment. If this is the case, then there are strong reasons to sympathize with a basic part of the revisionist argument, that the New Deal was motivated by political considerations more than a deeper urge for social reform.

II.

There are, however, two serious problems with the empirical techniques used in these studies and both are rooted in weaknesses in the available data. Arrington, Reading, and Wright were forced to aggregate federal grants to the state over the entire period 1933 to 1939 (or 1940) and use decennial averages for independent variables, while Wallis was limited to annual data for 1937 to 1940. In no case were adequate annual data on state level employment and unemployment available, aside from the returns of the decennial censuses and the unemployment census of 1937. The second problem is an econometric one. What were the connections between national grants and local employment? If national authorities gave larger grants to states with lower (or higher) levels of employment, and grants had a positive (or negative) effect on employment recovery, then it is appropriate, econometrically, to treat the two variables as endogenous.

The recent development of an annual, state level employment index for the 1930s has made it possible to begin answering these questions (Wallis, 1984b). Both Reading and Wright aggregated time series data on national grants to states for the entire New Deal. Reading identified a set of variables that proxy for "relief, recovery, and reform," the stated goals of the Roosevelt administration. Relief and recovery proxies included unemployment in 1937 (the only year with reliable unemployment estimates), the percentage of the popu-

lation on relief in 1935, and the percentage decline in per capita income between 1929 and 1932. The reform proxy was per capita income (averaged over the decade). Reading also included the percentage of land owned by the national government in each state as a control for the ease of implementing national spending programs and the desire of the public works administrators, particularly Harold Ickes, to improve the national estate.<sup>4</sup>

To these Wright added a set of political variables. The basic political productivity index was constructed from the voting patterns in presidential elections for the 40 years preceding the election of 1932. Briefly, Wright calculated the expected Democratic voting share in a state from historical precedent, as well as the distribution of the Democratic share in each state. Wright then assumed that an equal amount of national grants would shift the voting distribution 1% towards the Democrats in each state. The change in the probability of a Democratic victory (adjusted for electoral college votes) given the shift in the voting distribution was taken as the "political productivity" index. Wright also included the standard deviation of the Democratic share as a measure of voting variability in each state, to control for the possibility that votes might come cheaper in states without strong party loyalties, and the percentage of the population living on farms as a control for the differential cost and impact of programs in urban and rural settings.

Wright's basic estimate using his aggregated data is shown in column (1) of table 2. The results of disaggregating the dependent variable and the number of relief cases, and using a pooled time series cross section estimate are shown in column (2). The results for the political variables are qualitatively the same, but when relief cases are measured annually they do have a positive coefficient. This is not surprising since relief expenditures account for roughly two-thirds of all federal grants. It is not clear whether cases are driving grants or whether grants are driving cases, but the two are certainly endogenously determined.<sup>5</sup> Unemployment in 1937 remains statistically insignificant.

Column (3) of the table replaces the unemployment and relief cases variables with the annual state level employment index and annual real per capita income.<sup>6</sup> The results are not encouraging for a liberal view of the

<sup>&</sup>lt;sup>4</sup> Reading included a number of other variables, which were not statistically significant in his study and were subsequently dropped by both Wright and Wallis. These were the percentage of the population that was black, per capita highway miles, and tenant farms as a percentage of all farms.

<sup>&</sup>lt;sup>5</sup> Incorporating the endogenous relationship between grants and relief cases is a complicated problem. For a preliminary attempt to do so see Wallis and Benjamin (1985).

<sup>&</sup>lt;sup>6</sup> The sample excludes 1940. The employment index for 1940 covers only the months January to May, and therefore is not strictly conformable to the other years.

TABLE 2.—REGRESSION RESULTS, GRANTS EQUATION (ABSOLUTE t-STATISTICS)

	Wright (1)	Pooled (2)	Pooled with Income and Employment (3)	Pooled with Lagged Grants (4)	2SLS (5)
Employment Index			0.0002	-0.00019	- 0.00056
			(1.6)	(1.9) <sup>b</sup>	$(4.6)^{a}$
Per Capita Income			1.0E-04	9.9E-06	2.8E - 05
			(7.8) <sup>a</sup>	(0.87)	$(2.3)^a$
Political	1.36	0.177	0.17	0.095	0.09
Productivity	$(2.74)^a$	$(4.6)^{a}$	$(5.3)^{a}$	$(3.8)^{a}$	$(3.5)^a$
Voting Variability	0.011	0.0013	0.0016	0.0009	0.0009
	(2.06) <sup>b</sup>	$(3.3)^a$	$(4.8)^a$	$(3.5)^a$	$(3.4)^{a}$
Farm Population	0.238	0.028	0.11	0.027	0.045
	(1.95)	$(3.0)^{a}$	$(8.5)^a$	$(2.4)^a$	$(3.8)^{a}$
Federal Land	0.0048	0.0006	0.00061	0.0003	0.00019
	(4.79) <sup>a</sup>	$(7.6)^{a}$	$(8.5)^a$	$(4.9)^{a}$	$(3.1)^a$
Income Decline	-0.54	-0.000071	-0.000003	-0.00003	-0.000009
1929 to 1933	(1.36)	$(2.3)^{b}$	(0.12)	(1.4)	(0.4)
Lagged Grants			<u> </u>	0.55	0.56
	•			$(14.1)^a$	$(14.0)^{a}$
Relief 1935	0.093	0.011			
	(0.34)	(0.53)			
Unemployment	-0.0043	-0.00062			
1937	(0.23)	(0.43)			
Constant	-0.058	-0.0065	-0.086	0.005	0.028
		(0.68)	$(8.2)^{a}$	(0.56)	$(2.6)^{a}$
$R^2$	0.745	0.48	0.63	0.81	
V	48	336	336	288	288

Notes: Dependent variable in all regressions is national grants per capita.

Column (1): Taken from Wright (1974). Equation (13), p. 34. Grants per capita in nominal terms. Relief cases are the number of cases in 1935.

Columns (2) and (3): Grants per capita and per capita income measured in real terms, 1935 = 100.

Sample covers the years 1933 to 1939.

New Deal. Federal grants appear to have been larger in states with higher incomes and with higher levels of employment, hardly evidence for a policy of encouraging relief, recovery, or reform.

There are, however, two potential problems with the specification in column (3). First, as Wallis has shown, national grants were closely related to fiscal activity at the state level. In part, the positive coefficient on income, and perhaps employment, reflects the fact that high income states spent more on the types of programs for which they could receive national matching grants.<sup>7</sup> Wallis examined the period from 1937 to 1940. It is an irony of the New Deal that the Economy Act, passed in the first hundred days, cut the budgets of existing agencies and programs, leading the Census Bureau to suspend collection of "Financial Statistics of States"

which provided the necessary data to carry out an analysis similar to Wallis's for the entire period. A crude control for this, and the endemic possibility of missing variables, is to include a lagged dependent variable.

The results of this modification are shown in column (4) of table 2. Including lagged grants eliminates the statistical significance of the income coefficient and reverses the effect of current employment on current grants. This suggests that specification of the grants equation is a problem. Perhaps this is not surprising given our limited knowledge of the political process. Wright's political variables, however, continue to exhibit a strong statistical relationship to grants.

The second problem is the potential simultaneity between national grants to states and state level employment. Specification of the relevant determinants of state employment becomes a problem and, given the century long frustration in explaining the determinants of employment, a serious problem. An instrumental variable approach was chosen. Information on in-

Relief cases in column (3) is the sum of all cases receiving from the Federal Emergency Relief Administration (1933-1936), The Civilian Conservation Corp (1933-1940), Works Progress (Projects) Administration (1936-1939), Old Age Assistance (1936-1939), Unemployment Insurance (1938-1939), and General Relief from State and Local Governments (1937-1939).

Columns (4) and (5): Same as (2) and (3) Only sample covers 1934 to 1939.

<sup>5%</sup> significance level. b10% significance level.

<sup>&</sup>lt;sup>7</sup> Wallis (1984a) did not include information on employment, leaving open the possibility that, controlling for income, states with higher employment also spent more on relief, leading to a similarly perverse result.

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dustrial composition of state level employment was combined with national industrial employment trends to construct a variable that represents the effect of national employment movements on state level employment. This and the exogenous variable in column (4) were used as instruments for the 2SLS results shown in column (5).

Accounting for the simultaneous determination of grants and employment strengthens the estimated effect of employment on grants (roughly tripling the coefficient). The significance of the income coefficient is restored by the adjustment, however. A Hausman specification test supports the use of a simultaneous equations estimator.<sup>9</sup>

How large are these effects economically? The elasticity, evaluated at sample means using the 2SLS coefficients, of grants with respect to employment is -1.32, and of grants with respect to political productivity is -0.085. For purposes of comparison, a one standard deviation decrease in employment would raise annual per capita grants by \$6.70 while a one standard deviation increase in political productivity would raise annual per capita grants by \$3.20. Per capita grants per year averaged \$44 over the period with a standard deviation of \$27. Both political and economic factors are significant, but by no means dominant, factors in explaining the pattern of grants between the states.

## III.

Although one must exercise considerable caution in reasoning from rather narrow econometric results to large historical issues, the revised estimates restore a measure of substance to the traditional view of the New

<sup>8</sup> To capture the differences in industrial employment in each state, an employment composite was constructed from reported BLS indices on national monthly employment by industry. For each state in each year the composite index was built up from national industrial employment indices for 23 industries and the industrial employment shares in that state taken from the 1930 census:

$$CEI_{ik} = S_{ij} * E_{ik}$$

where  $CEI_{jk}$  is the composite employment index in state j in year  $k;S_{i,j}$  is the share of state employment in industry i, in state j; and  $E_{ik}$  is the national employment index for industry i in year k. The variable represents what employment would have been in each state in each year if employment in each industry in the state had moved in step with national employment in that industry. The composite index should capture those variations in state employment that are due to movements in employment in each industry at the national level.

<sup>9</sup> A variety of other estimators, including 3SLS and simultaneous error components, produced essentially the same results.

Deal. However, there remains a good deal of room for skepticism about the New Deal's motives. Wright is still right, at least in part: politics were important determinants of New Deal spending. On the other hand, New Deal administrators did respond to lower employment levels when distributing national grants. Statistically this effect is masked by the simultaneous effect that those grants had on employment in the states and the inherent difficulty in specifying an econometric model of something as complicated as the political process of distributing grants to the states. This led Wright to believe that political factors were much more important than economic factors.

In all likelihood, the source of the problem with the OLS estimates lies with the political behavior of the states. If high employment and high income led states to spend more money on programs with matching provisions, then accounting for endogeneity of employment and grants allows us to see more clearly how the national program administrators used their discretionary authority to channel grants to states with lower employment levels.

These results also strengthen the traditional argument in a more subtle way. Endogeneity of grants and employment works through the agency of the states: state decisions about taxing and spending predicated on state income and employment conditions produce the econometric difficulties. Institutionally FDR must have faced a similar problem. The New Deal would find its most cooperative partners in financing relief and recovery programs in those states least in need of reform, i.e., those states with higher incomes. Not only might congressmen from those low income, southern and agricultural states resist reform, so might the states themselves be able to frustrate reform by refusing to carry their share of the programs' costs. An individual state could effectively block a relief program within its boundaries simply by refusing to participate financially. Roosevelt's conservative opposition was not only on Capitol Hill, it was in state capitals throughout the nation. Such a program would be politically palatable to the extent that it gave states that wanted more liberal relief and reform a high option, financed in part by state funds, and allowed states with little desire for reform to do little.

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<sup>&</sup>lt;sup>10</sup> Using a one standard deviation criteria is always arbitrary, particularly in the case of a highly artificial variable like Wright's political productivity measure. It amounts to roughly doubling the political productivity of the average state.

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# ON THE DISTRIBUTIONAL SHAPE OF UNEMPLOYMENT DURATION

# John T. Addison and Pedro Portugal\*

Abstract—Using an accelerated failure time model, the extended generalized gamma distribution is deployed to discriminate among various special cases of that distribution. Displaced worker data from the January 1984 Current Population Survey are analyzed within a regression framework that accommodates the stochastic nature of the point of censoring associated with incomplete spells of unemployment. Not only are the regression parameters sensitive to distributional assumption but also there is evidence of different distributional shapes and hence duration dependencies in subsets of the data.

#### I. Introduction

The use of conventional regression methods to analyze duration data has been criticized because of their inability to handle censored spells and time-varying explanatory variables (Heckman and Singer, 1982). And despite the recent emergence of the hazard function in the duration literature (Flinn and Heckman, 1982), empirical applications have imposed specific distributional assumptions that have been found to affect the estimated parameters (Heckman and Singer, 1982).

The methodology employed in the present paper to analyze unemployment duration data takes account of both censored and uncensored observations and accommodates the stochastic nature of the point of censoring.<sup>1</sup>

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<sup>1</sup> Note that since our data base comprises single spells of unemployment, the problem of time-varying explanatory variables is not acute.

The principal goal is to test the parametric restrictions on the extended generalized gamma distribution presented by Farewell and Prentice (1977), and to examine the sensitivity of the regression estimates to specific distributional assumptions. Not only are estimates of the regression parameters found to vary widely among the parametric models, but also, and more importantly, different distributional shapes are detected in subsets of the data.

## II. The Model

We specify an "accelerated failure time" model, which has been described in detail by Kalbfleisch and Prentice (1980) and applied by Lancaster (1979), Heckman and Borjas (1980), and Nickell (1979).

We assume that the natural log of unemployment duration is linearly related to covariates X

$$\log_e T = X\beta + \sigma\omega$$

$$T = \exp(X\beta)T_0^{\sigma}, \tag{1}$$

where  $\omega$  is an error term with density  $f(\cdot)$ ,  $T_0 = e^{\omega}$ , and  $\sigma$  is a scale parameter.

Equation (1) is consistent with different continuous distributions for  $\omega$  and hence T. A number of studies have suggested a variety of methods to discriminate among the alternatives using parametric families of distributions. Thus, Farewell and Prentice (1977) favor the extended generalized gamma, Lee (1984) suggests using the Pearson family of distributions, Kiefer (1985) advances some specification diagnostics based on Laguerre polynomials, Butler and McDonald (1986) employ a generalized Beta (of Type II), while Cameron