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Efficiency considerations and the allocation of new deal funds: an examination of the public goods explanation of expenditure patterns

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Abstract

The uneven state-level distribution of New Deal spending has been frequently studied and a variety of economic and political models have been developed. In their article, "Does the Distribution of New Deal Spending Reflect an Optimal Provision of Public Goods?," (Economics Bulletin, Vol. 8, No. 3, 2007. pp 1-5) Bateman and Taylor propose that much of the disparity in state-level New Deal expenditures can be explained if the creation of public goods and the spillover effects are included in economic models. Using the available wealth of data on New Deal programs, expenditures by agencies within the New Deal are examined and correlation statistics provided to test this hypothesis against the 1930 US census population density figures.

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1. Introduction

In their article, "Does the Distribution of New Deal Spending Reflect an Optimal Provision of Public Goods?," (*Economics Bulletin,* Vol. 8, No. 3, 2007. pp 1-5) Bateman and Taylor examine the highly uneven allocation of New Deal funds to the states. Previous studies, they note, have determined that measures of economic need provide little to no explanatory power for the distribution.

On a per capita basis, dollars flowed disproportionately to rural western states. Because the western states were rich in electoral votes per capita, tended politically to be swing states and had representatives on key congressional committees, models advancing a political motivation to the observed expenditure pattern have proven to be robust.

Bateman and Taylor, however, point to an alternative explanation for the highly uneven allocation pattern. Namely, they explain, "we offer a spillover interpretation which could help explain some of the rural state per capita expenditure bias" (2007:1). Because "a large portion of New Deal spending went toward spillover-creating public capital" (2007:1), measuring the impact of New Deal expenditures on a per capita basis is "problematic" (2007:2). The nature of public goods–non-rival and/or non-excludable–means that "densely populated states should receive less per capita spending than rural states" (2007:2) in order to meet economic efficiency standards.

The authors illustrate their hypothesis with the following example: "Dollars spent on the Triborough Bridge complex benefited millions of people in the New York metropolitan area either directly or indirectly through lower traffic congestion, increased rates of return to investment, and increased leisure time. Were those same dollars spent upon a similar project in a far smaller urban area such as Pocatello, Idaho, they would clearly have had a much smaller welfare impact" (2007: 3).

As evidence, the authors calculate the population density of each state–total population divided by acres of land–and rank the states from 1 (least dense) to 48 (most dense). They note, "the nine least densely populated states are also the nine states that received the most per capita New Deal expenditures" (2007: 4).

Bateman and Taylor make it clear that intent is not the focus of their argument; they are not speculating "as to whether or not New Dealers meticulously attempted to meet the efficiency condition for the allocation of public goods" (2007: 2). Instead, whether through careful planning or simply serendipity, the allocation of New Deal dollars was efficient. The authors assert, "a public goods analysis . . . could provide an alternative explanation to past findings" (2007: 5).

By disaggregating the data and examining particular New Deal programs, considerable doubt is cast on the public good explanation of the distribution of federals dollars during the Roosevelt administration. In the next section, we examine the New Deal in greater detail and provide correlation statistics that undermine the argument offered by Bateman and Taylor.

2. A Closer Examination of the Public Goods Explanation

Efficiency was never a stated goal adopted by the New Dealers. Instead, Franklin Roosevelt rather famously promised the three r's: relief, recovery and reform. The myriad alphabet agencies created addressed different concerns and problems in the Great Depression impacted economy.

Students of the New Deal attempting to make some sense of the measures adopted rarely

advance some sort of efficiency explanation: "In 1936, two agricultural programs existed side by side–the AAA and the NRA–one trying to limit production within the system, the other trying to increase it while reforming the system" (Conkin 1975: 8). The AAA sought to raise farmer's incomes relative to farm implements; the NRA was designed to increase the price of manufactured goods including that of farm implements. An undistributed profits tax placed on corporations was enacted to stimulate consumption by encouraging firms to distribute earnings to shareholders; social security taxes adopted during the Great Depression obviously worked at cross purposes by reducing disposable income. The AAA paid farmers not to plant taking fertile land out of cultivation; the Bureau of Reclamation worked to irrigate arid sections of the country so that more land could be cultivated.

The public good explanation, however, can be attacked in a more direct fashion. Bateman and Taylor assert that "a large portion of New Deal spending went toward spillover-creating public capital." In fact, they utilize total New Deal expenditures to test their hypothesis.

This is a misrepresentation of the New Deal. Almost 20 percent of total New Deal dollars was allocated to relief and social welfare programs. Total agricultural spending accounted for an additional 21 percent of total expenditures. Work programs, while admittedly the largest category, made up slightly more than one-third of total spending (Couch and Shughart 1998: 22).

Few would assert that agricultural expenditures generated spillover benefits. In fact, a strong argument can be made that substantial negative externalities were created. Assistance for farmers provides a clear example of the unintended consequences of government meddling in the marketplace.

Farming was much different in the 1930s. In fact, tenant farmers (individuals that worked on farms but did not own the land) made up almost half of the farmers in the United States during the period. The 1937 *Statistical Abstract of the United States* indicates that in 1935, tenants operated close to 70 percent of the farms in Mississippi, 50 percent of the farms in South Dakota, Nebraska and Iowa, and 40 percent of the farms in Colorado. In short, tenants were spread across the nation and tenant farming or sharecropping was common.

New Deal agricultural policy created perverse incentives–at least from the perspective of the tenant farmer–that made it profitable for the landowner to evict their tenants. In a survey of southern farms, "croppers [tenants] showed a decrease of 63,000 or nearly a ten percent reduction between 1930 and 1935" (Holley et al. 1940: 49). Whatley (1983: 919) did the math: On an acre yielding 350 lbs of cotton the return from displacing a tenant farmer increased with time from $2.62 per acre in 1934 to $19.16 per acre in 1939. He explains, "A once 'fair' landlord, responding to his tenants pleas for 'fairness' may soon have to reply, 'I'm sorry, but the cost has simply become unbearable'" (Whatley 1983: 919). Bateman and Taylor, in their analysis, include agricultural expenditures and thus count this as a spillover benefit.

To be fair, the authors concede this point, "Further empirical work should examine the composition of state-level New Deal projects to more precisely determine the extent that expenditures in various states went to spillover-creating public capital rather than simply transfer payments such as agricultural subsidies of 'leaf-raking' type projects" (Bateman and Taylor 2007: 5).

3. Empirical Evidence

Because of the richness of our information regarding New Deal spending, a disaggregation of the data is possible. While Bateman and Taylor cite Reading (1973) as the source of their data, Reading, like other scholars that have examined the distribution of New Deal spending from

state-to-state utilized a data set discovered by Leonard Arrington in 1969. "Prepared late in 1939 by the Office of Government Reports for the use of Franklin Roosevelt during the presidential campaign of 1940, the 50-page reports–one for each state–give precise information on the activities and achievements of the various New Deal economic agencies" (Arrington 1969: 311). The data set makes it possible to test the Bateman and Taylor public good hypothesis.

Bateman and Taylor compare total New Deal expenditures to a ranking of population density.   In order to obtain a more complete metric regarding dollars and density, we calculate the correlation coefficient of total New Deal spending and actual population density in year 1930 (more information than rank) to establish a benchmark for comparison purposes.   In addition, because agricultural expenditures comprised one-fifth of all New Deal spending and generated no spillover benefits (likely negative externalities), its correlation per farmer in each state with population density sheds additional light on the public goods hypothesis.

The correlation coefficient of total New Deal spending and population density is -0.375 while the correlation coefficient of AAA expenditures and population density -0.420.   Neither is strongly correlated and, perhaps surprisingly, AAA payments per farmer that generated no positive externalities are more highly correlated than total spending per citizen.

Next, the work programs are examined.   The author's acknowledge that "so-called 'leaf-raking' projects" accounted for little spillover benefits.   The program the authors are likely alluding to is the Civil Works Administration (CWA), a federally sponsored work relief program hastily put together.   The winter of 1933-34 looked as "dismal and bleak as any during President Hoover's tenure in office" (Charles 1963: 46).   Thus, the CWA was set up as a stopgap agency to somewhat ameliorate the harmful effects wrought by the downturn.   The program's goal was to provide employment for 4 million persons in projects deemed "socially and economically desirable, and of such character that could be undertaken quickly" (Office of Government Reports 1939: 74).   History records that "undertaken quickly" came to dominate "socially and economically desirable." Charles (1963: 63) complains, "there was no need for leaf raking and similar projects."

While the CWA is undoubtedly the New Deal program least likely to generate positive externalities, the Public Works Administration (PWA) was, by design, established to undertake technically complex projects.   PWA projects include the 100-mile causeway connecting Florida and Key West and the Triborough Bridge–the project serving as an example of spillover-creating goods in the Bateman and Taylor analysis.   "Much of the PWA appropriation," McElvaine notes, "went for materials, architects, engineers and skilled workers" (1984: 152).

The PWA and the CWA represent extremes within the New Deal work programs–one devoted to technically complex public goods of lasting value and the other hastily put together to provide employment opportunities during a particularly troubling time.   If the public good viewpoint has any validity, then PWA expenditures should be more highly correlated with population density than CWA expenditures (or for that matter, AAA appropriations).

However, when expenditures are correlated with actual population density, the results do not support the public good viewpoint.   For example, PWA expenditures and population density are found to have a very low correlation coefficient of -0.156 while CWA expenditures and population density have a slightly higher correlation coefficient of -0.184.   Neither demonstrates a significant degree of correlation.   On the other hand, AAA expenditures and population density are found to have a much higher correlation coefficient of -0.420.   Even the overall New Deal expenditures and population density have a higher correlation coefficient of -0.375.

PWA expenditures per capita demonstrated the least, not the most, correlation with

population density.   To suggest that dollars flowed disproportionately to the west to meet efficiency requirements is simply untenable given the results presented above.

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Table I

New Deal Per Capita Expenditures by State

State	1930 Pop Density per Square Mile	Population Density Rank	PWA Expenditures	CWA Expenditures	AAA Expenditures	Overall New Deal Expenditures
Alabama	51.6	28	17.83	5.85	68.5	309.78
Arizona	3.8	5	64.18	10.15	97.83	791.46
Arkansas	35.3	20	40.41	6.09	86.35	396.12
California	36.5	21	37.01	6.32	80.14	538.1
Colorado	10.0	11	23.14	6.95	151.37	506.30
Connecticut	333.4	45	24.68	5.86	29.61	236.92
Delaware	121.3	39	88.42	2.51	44.07	310.13
Florida	26.8	17	58.77	10.04	35.59	377.21
Georgia	49.5	26	14.92	4.42	68.5	272.69
Idaho	5.3	6	26.74	11.49	139.28	744.15
Illinois	136.2	40	34.29	7.38	129.01	364.88
Indiana	89.8	38	16.78	6.9	87.75	333.22
Iowa	44.5	24	30.33	5.77	200.53	466.70
Kansas	23.0	14	22.22	6.57	255.47	434.30
Kentucky	65.1	35	21.83	3.7	44.45	251.04
Louisiana	46.3	25	42.27	6.04	90.09	369.88
Maine	26.7	16	39.11	5.76	19.53	336.07
Maryland	164.1	42	36.88	5.25	63.18	344.82
Massachusetts	528.6	46	27.95	7.18	28.33	286.26
Michigan	84.2	37	20.24	9.56	43.73	388.99
Minnesota	31.7	18	28.89	7.07	99.13	425.50
Mississippi	43.4	23	40.82	4.01	82.77	358.18
Missouri	52.8	29	84.02	5.28	81.68	340.07
Montana	3.7	4	245.69	11.47	252.83	986.30
Nebraska	17.9	12	58.58	4.39	212.92	536.87
Nevada	0.8	1	61.3	12.83	55.12	1499.39
New Hampshire	51.5	27	16.18	7.25	13.09	247.76
New Jersey	537.8	47	31.53	6.83	24.86	330.47
New Mexico	3.5	3	64.13	5.25	73.79	689.76
New York	264.2	44	29.43	6.27	25.55	334.81
North Carolina	65.0	34	16.12	3.67	52.01	227.55
North Dakota	9.7	9	12.25	7.53	271.3	707.84
Ohio	163.1	41	24.46	8.59	57.55	383.24
Oklahoma	34.5	19	17.41	7.64	133.89	342.66
Oregon	10.0	10	68.18	6.48	83.99	535.66
Pennsylvania	214.8	43	19.08	4.62	16.99	260.88
Rhode Island	644.3	48	29.18	5.37	8.83	246.56
South Carolina	57.0	31	25.19	5.12	71.43	306.43
South Dakota	9.0	8	17.36	9.89	240.05	701.61
Tennessee	62.8	33	34.69	4.77	45.1	344.48
Texas	22.2	13	26.43	5.26	156.58	361.70
Utah	6.2	7	24.04	8.49	77.98	569.49
Vermont	39.4	22	16.68	4.93	16.99	390.49
Virginia	60.2	32	42.02	4.75	21.42	254.91
Washington	23.4	15	60.94	8.3	96.75	527.77
West Virginia	72.0	36	38.06	7.22	8.79	265.11
Wisconsin	53.2	30	23.92	11.68	50.82	390.26
Wyoming	2.3	2	49.71	10.53	157.58	896.91