ELSEVIER

Journal of Public Economics 91 (2007) 1043 – 1069

JOURNAL OF PUBLIC ECONOMICS

www.elsevier.com/locate/econbase

Faith-based charity and crowd-out during the great depression☆

Jonathan Gruber [a,*], Daniel M. Hungerman [b]

[a] *MIT and NBER, United States*
[b] *University of Notre Dame and NBER, United States*

Received 24 April 2006; received in revised form 9 November 2006; accepted 12 November 2006
Available online 16 January 2007

Abstract

Interest in religious organizations as providers of social services has increased dramatically in recent years. Churches in the U.S. were a crucial provider of social services through the early part of the twentieth century, but their role shrank dramatically with the expansion in government spending under the New Deal. In this paper, we investigate the extent to which the New Deal crowded-out church charitable spending in the 1930s. We do so using a new nationwide data set of charitable spending for six large Christian denominations, matched to data on local New Deal spending. We instrument for New Deal spending using measures of the political strength of a state's congressional delegation, and confirm our findings using a different instrument based on institutional constraints on state relief spending. With both instruments we find that higher government spending leads to lower church charitable activity. Crowd-out was small as a share of total New Deal spending (3%), but large as a share of church spending: our estimates suggest that benevolent church spending fell by 30% in response to the New Deal, and that

☆ We are grateful to participants at the MIT public finance lunch, the Sloan Marketing Seminar, the Applied Microeconomics Seminar at Columbia, the SSRC capstone conference on non-profits and philanthropy, the University of Illinois-Chicago, and the ASSA meetings for helpful comments, and to Jocelyn D'Arcy, Ariel Edelstein, George Lam, Christopher Lee, Matthew Levy, Bert Lue, Benjamin North, Phillip Neuhart, Eechen Ong, Naakorkoi Pappoe, Dipan Patel, Juliana Perez, Joanna Shen, Ira Simkhovitch, Aek Thimton, Anthony Tse, Constantinos Tsoucalas, Jonathan Ursprung, Jennifer Wong, and James Xenakis for excellent assistance in creating the data for this project. The authors have endeavored to make the data used here available for others as needed. Price Fishback, Shawn Kantor, John Wallis, and the Southern Baptist Historical Library and Archives also provided data. Thanks also to the referees for helpful comments. This work was supported by the Metanexus Institute. Hungerman also acknowledges financial support from the NBER.

* Corresponding author. Tel.: +1 617 253 8892.
E-mail address: gruberj@mit.edu (J. Gruber).

0047-2727/$ - see front matter © 2007 Published by Elsevier B.V.
doi:10.1016/j.jpubeco.2006.11.004

government relief spending can explain virtually all of the decline in charitable church activity observed between 1933 and 1939.
© 2007 Published by Elsevier B.V.

Keywords: Crowd-out; Charitable giving; Religion; Great depression

Recent years have seen increased interest in religious organizations as providers of social services. Starting with the passage of "charitable choice" legislation in the 1990s and continuing with the establishment of Faith-Based and Community Initiatives Centers throughout the executive branch of the Federal government, policy makers have dramatically increased the opportunity for church-state cooperation in aiding the poor. Part of the impetus behind this policy trend is the argument, advocated by individuals such as the influential Marvin Olasky (1992), that the current welfare state is inferior to the relief services historically offered by churches and other private organizations. As Olasky writes, "Isn't it time we realized that there is only so much that public policy can do?… Isn't it time to realize that only a richness of spirit can battle a poverty of soul?" (page 232). These statements have been disparaged by some researchers; Katz (1996) states that Olasky's work represents a "fundamental misreading of the evidence" (page 371, note 122).

It is certainly true that churches and other faith-based charities played a larger role in the past than they do today, in particular compared to the size of the government. In 1926, congregations spent over $150 million on projects other than church maintenance and upkeep (Bureau of the Census, 1930). That same year state governments spent $23 million and local governments spent $37 million on programs the Census Bureau identified as charitable in nature, and relief spending undertaken by the Federal government was negligible.[1] Yet church charitable activity fell dramatically starting in the early 1930s, at the same time that the role of the government grew through the New Deal. This raises the central question of whether the growth in government social service provision "crowded-out" charitable activity by churches.

We know very little, however, about the interaction between public sector spending and church benevolence, either during the depression or today. Indeed, this uncertainty extends to the larger literature on the crowd-out of private charitable contributions by government activity. Despite theoretical and laboratory results suggesting that crowd-out should be large, the empirical literature on crowd-out yields a wide variety of estimates, most close to zero.

In this paper, we directly measure the impact of government spending on church charitable activity, with two goals: to understand specifically how the government interacts with church benevolence, and to provide more generally a convincing estimate of the extent of crowd-out in one sector. To do so, we investigate the extent of crowd-out of charitable church spending by government relief spending during the Great Depression. This is a particularly interesting era to analyze both because of the crucial role that historical faith-based charity plays in current policy debates, and because the New Deal represented an extraordinary expansion in the role of government, as public-aid expenditures increased more than six-fold from 1933 to 1939 (National Resources Planning Board, 1942).

[1] These government activities include expenditures on outdoor poor relief, poor institutions, temporary homes for women and girls, care for children, care for the blind, deaf, and mute, and other charitable spending. The state data come from Table 11 of the Bureau of the Census (1927) and the city data come from table 12 of the Bureau of the Census (1928).

A difficulty in such an analysis is that the New Deal was a response to changing economic conditions. It may be the recession, not the New Deal, which led churches to contribute less. We address this difficulty through our choice of data and our methodology. Regarding our data, there exists for a number of major Christian denominations church yearbook data that detail church benevolent activity not only nationally, but locally as well. We use these data to build a data set of church charitable activity by state and year from 1929 to 1939 for six of the largest Christian denominations of this era, which represented more than 20% of all churches at the time. We also use data from the Census of Religious Bodies, a national, multi-faith, decennial survey covering the vast majority of all religious adherents in the country. We match both of these data sets to information on New Deal-related relief spending by state and year.

Regarding methodology, there is a natural instrumental variables strategy which can allow us to disentangle the causal role of government spending on church charitable activity: using changes in the political power of state congressional delegations over this period. Following Anderson and Tollison (1991) and Couch and Shughart (1998), we consider the tenure of a state's representatives on the House Appropriations Committee as a predictor of New Deal relief spending. Changes over time in that tenure, after the New Deal is in place relative to before, are exogenous predictors of the distribution of New Deal spending.

We find strong evidence that the rise in New Deal spending led to a fall in church charitable activity. Our central estimate suggests that each dollar of government relief spending in a state led to three cents less church spending. The reduction in church spending was thus very small as a proportion of New Deal spending, but somewhat larger when regarded as a proportion of church spending, since benevolent church spending at the start of this period amounted to only 10% of the ultimate size of the New Deal. The New Deal crowded-out at least 30% of benevolent church spending and can explain the entire time series decline in church benevolence over this period.

These results are not driven by any particular denomination, and they are robust to a number of different tests and specifications. Most strikingly, the results are also significant (and somewhat larger) using a completely different instrumental variables strategy, based on the fact that similar states often faced very different constitutional restrictions when financing relief. These restrictions may have affected states' abilities to exploit the matching properties inherent in many New Deal relief programs, again creating a plausibly exogenous source of variation in relief spending. While the results are robust to either instrumental variables strategy, there remains some uncertainty as to whether our estimates are driven by changes in church donations or reallocations of church expenditures. We discuss this ambiguity more in the conclusions.

Our paper proceeds as follows. Section 1 provides background on the role of churches as a provider of benevolent activities, and past literature on crowd-out. Section 2 discuses our data, and Section 3 focuses on our empirical strategy. Section 4 presents our basic results, while Section 5 presents a host of sensitivity checks. Section 6 concludes.

1. Background

1.1. Churches as a provider of charitable activity

Charitable church activity has played an important role throughout much of American history.[2] The philanthropic role of churches was somewhat limited in colonial times (Cnaan et al., 1999).

[2] Since data for our project were only available for Christian denominations, we use the shorthand of churches when discussing religious organizations in general.

But after the Revolutionary War, a large influx of immigrants led to a proliferation of churches that provided social services to their respective ethnic groups (Cnaan et. al., 2002). Large revival movements in the early 1800s further increased interactions between religious proselytizers and the needy; this in turn led to new opportunities for church-based philanthropic work (Katz, 1996). The "Social Gospel" movement, a term first used in 1886, galvanized many church-goers to actively address various social problems (Cnaan et al., 1999). By the early twentieth century, charitable church activity played a "vital" role in helping the needy, and church social work included a wide variety of activities, such as employment services, hospital visitation, cooperation with government correctional and medical institutions and other social service agencies, advocacy for social causes, educational services such as job training and basic hygienic instruction, and various programs to aid the poor (Johnson, 1930).

In recent years, church social service provision has been dwarfed by the role of the government in the U.S. But there is a large literature that illustrates the important role churches continue to play as social service providers. Hodgkinson, Weitzman, and Kirsch (1988), Dudley and Rosen (2001), Cnann et. al. (2002) and Wuthnow (2004) all suggest that 80–90% of churches are actively engaged in providing social services to the community. There is no work, however, examining the earlier era of the U.S. when churches played a larger role in social service provision; nor is there any work examining the role of government expansion in bringing about the end of that era.

1.2. The importance of crowd-out

Why do we care whether the government crowds-out church activity? One important reason to care is claims that churches may be superior providers of charitable activity (e.g., Olasky, 1992). But there is little quantitative evidence on the benefits of faith-based social service provision, and even less evidence on whether government services actually crowd-out church services. The only paper that directly assesses public social service spending crowding-out church spending is Hungerman (2005). His paper estimates the response of one Christian denomination to the cutbacks in welfare for immigrants in the 1990s. He finds evidence of crowd-out, with each one dollar in reduced welfare spending leading to 20 to 38 cents more in church spending. This finding is suggestive, but it applies only to one denomination responding to a very particular change in government policy, so its broader applicability is unclear.

Another reason to care about church–state crowd-out is that this analysis can provide a general insight into the crowd-out of private charitable contributions by government activity. There is a sizeable literature on the crowd-out of private charitable activity by the public sector, but this literature has produced very mixed results; see Steinberg (1991) for an excellent review. Some of the articles in this literature have focused on the effect of direct government grants to a charitable organization on donations to that organization (e.g. Kingma, 1989; Khanna et al., 1995; Payne, 1998; Okten and Weisbrod, 2000; Khanna and Sandler, 2000; Straub, 2004). Others have focused on the effect of general government transfer spending on charitable donations (e.g. Reece, 1979; Abrams and Schmitz, 1984; Lindsey and Steinberg, 1990). Most of these articles find either no crowd-out of government transfers, or even crowd-in, with higher government transfers leading to more private donations. A few estimate larger crowd-out effects, with Payne's estimate of 50% crowd-out at the upper end of these findings.

The lack of evidence for crowd-out contrasts strongly with theoretical results suggesting large crowd-out (e.g. Roberts, 1984; Bergstrom et al., 1986), as well as with experimental evidence that shows large (but still incomplete) crowd-out in laboratory settings (Andreoni, 1993). The reason

for this contrast may be that the articles in the crowd-out literature to date have not dealt effectively with the joint determination of government transfers and private contributions. At the level of the individual non-profit, it is natural to think that government transfers and private contributions are jointly determined. Charities which are particularly successful at fund-raising may be able to garner more funds from both sources; this may bias downwards estimates of crowd-out (Andreoni and Payne, 2003).

Some past research has tried to overcome this joint-determination problem by using general government transfers, either as an instrument at the level of the non-profit (Payne, 1998; Khanna and Sandler, 2000) or in a general model of charitable contributions. Some studies use time series variation in the size of government or government transfers (Khanna and Sandler, 2000; Abrams and Schmitz, 1984), while others use variation in social welfare spending across states (Reece, 1979; Payne, 1998). Neither of these is likely to be exogenous to individual donative behavior. Time series factors, such as the state of the economy or the distribution of income, will affect both government spending and individual donations. Similarly, variation across states in welfare spending will be driven by economic factors that might also determine individual giving.

Thus, the contradiction between the large crowd-out predictions of theory and the lack of crowd-out evidence in the empirical literature may be due to identification problems with this literature. While our paper is focused on only one aspect of private charitable behavior, church benevolent expenditures, our findings are well-identified and have broader implications for the debate over crowd-out.

One other study deserves special mention in our context: Roberts (1984) uses national data on city-level private relief expenditures to document a dramatic fall in those expenditures as government spending rose under the New Deal. But this evidence is not compelling, given that prior to 1933 this data set's measure of private spending includes funds given from public sources to private agencies. The Federal Emergency Relief Administration (FERA) mandated in August 1933 that public funds be administered by public agencies, creating a mechanical crowd-out effect in Roberts' data (Winslow, 1937). Our data come from churches, which are not included in Roberts' data (Baird and Lynch, 1942). We are therefore able to avoid the mechanical crowd-out that drives Roberts' result.[3]

2. Data

2.1. Church benevolent activity

For our analysis of charitable spending by churches, we constructed a new data set of information on church benevolent activity for state and year over the 1929 to 1939 period. Our primary resource for doing so was the yearbooks available for a number of the major Christian denominations each year. We chose for our analysis any of the largest denominations which reported annual data at the state level (or at a finer level of detail that could be aggregated up to states) over the 1929 to 1939 period. Our final sample consists of six denominations:

[3] Using a modified version of these relief data, Fishback, Haines and Kantor (2002) note, "the monies from privately administered relief in many cases came from government sources" (footnote 5). Winslow (1937), when analyzing this data set writes, "In 1932, 45 percent of the expenditure for direct relief administered by nonsectarian private agencies was from public funds. The requirement of the Federal Emergency Relief Administration in August 1933 that relief from public funds be administered by public agencies caused marked reductions during the latter part of the year in the relief administered by nonsectarian private agencies in a number of areas" (page 49).

Table 1
Basic denomination information

Denomination	Acronym	Rank in size, 1926	Total members in 1930 (1000s)	Average per member charitable spending	Observations in data
Congregational Christian Churches	CCC	11	909	2.22	407
Lutheran Church-Missouri Synod	LCMS	10	767	2.68	143
Northern Baptist Convention	NBC	8	1434	2.88	373
Presbyterian Church in the United States	PCUS	15	423	1.35	165
Presbyterian Church in the USA	PCUSA	5	1929	3.37	462
Southern Baptist Churches	SBC	3	3850	1.71	197

Means are weighted by members, in year 1929 dollars. Rank data taken from 1926 Census of Religious Bodies. The unit of observation is all of a denomination's churches in a given state in a given year (for example, all the Southern Baptist Churches in Alabama in 1929 is an observation). For information on the geographic coverage of each denomination, see Appendix Table A3.

Congregational Christian Churches (according to the 1926 Census of Religious Bodies, this was the 11th largest denomination in the country in 1926), the Lutheran Church-Missouri Synod (10th), the Northern Baptist Convention (8th), the Presbyterian Church in the United States (15th)[4], the Presbyterian Church in the USA (5th), and Southern Baptist Churches (3rd). Table 1 provides some basic information on each denomination.

To gather these data, we used all relevant elements of financial reporting in yearbooks published by each of these denominations. The unit of analysis consists of all the churches in a given denomination, in a given state. The most important issue when collecting the data was the fact that some denominations reported information aggregated not by state but by some other denomination-specific area (such as a presbytery). In such cases we collected data on whether these areas crossed state lines, and any multi-state area which did not have at least 80% of its churches in a particular state was omitted.[5] A second issue is that there were a few mergers during this time period involving our denominations, but these mergers were minor. Appendix A in the working-paper version of this text (Gruber and Hungerman, 2005) discusses these issues on a denomination-by-denomination basis. Membership and benevolence definitions are given in Tables A1 and A2.

There are two primary limitations of this data source. First, our key measure of charitable church activity is *benevolences*, all church spending beyond local operating expenditures and upkeep. There are a number of types of spending that benevolences subsume, including but not limited to local charitable spending. Second, our data exclude some of the largest denominations, most notably the Catholic Church, which does not provide national yearbook data on church benevolence. This raises the important question of the representativeness of our set of denominations for the overall amount of church charitable activity in the U.S.

To address both of these issues, we use data collected by the national Census of Religious Bodies. This survey, carried out in both 1926 and 1936, collected information on membership, number of congregations, and some financial information for a broad cross-section of religious

[4] This denomination is also sometimes called the Southern Presbyterian Church; it had split from the northern branch of Presbyterianism over slavery in 1861. Our two Presbyterian denominations eventually merged in 1983.

[5] In all such cases the number of observations with fewer than 80% of their churches in one state was reasonably small, often between 5% and 10% of the sample. These excluded observations often consist of churches in an area where the denomination is not traditionally located, or (for some denominations) churches that are historically black, Welsh, or German.

denominations in the United States. These surveys represented the last installments in a general series of religious data collected by the census at varying intervals from 1850 through 1936. The surveys were national and multi-faith, and contained information on the great majority of all adherents in the country. However, the last survey, in 1936, suffered from lower levels of cooperation and is generally regarded as less reliable than preceding censuses.

In Table 2, we use data from the 1926 and 1936 censuses to compare our set of denominations to the entire set of denominations collected. As Panel A of the table shows, our set of six denominations represent 20% of churches and 15% of members in 1936, and 23% of churches and 17% of members in 1926. Both in our set of denominations, and nationwide, the number of churches declined; the number of members rose nationally but not for our denominations. This difference in membership trends is largely due to an acknowledged undercounting of Southern Baptist Churches by the 1936 census; the religious census itself cites as the correct number the

Table 2
Comparison of denominations

Panel A: membership

	Churches (1000s)		Membership (1000s)		Modified churches (1000s)		Modified membership (1000s)	
	1926	1936	1926	1936	1926	1936	1926	1936
Our denominations	53	40	9,194	8,445	53	51	9,194	10,223
All denominations	232	199	54,576	55,807	232	210	54,576	57,590

Panel B: expenditures

	Expenditures per member		Operating expenditures per member		Benevolent expenditures per member		Modified benevolent expenditures per member	
	1926	1936	1926	1936	1926	1936	1926	1936
Our denominations	21.71	10.94	17.00	8.76	4.71	2.18	4.71	2.18
All denominations	14.97	9.01	12.22	7.24	2.75	1.77	3.18	1.69

Panel C: percentage breakdown of non-operating expenditures

	Home missions and relief	Foreign missions and spending to headquarters	Other spending
Our denominations	26	52	21
All denominations	25	45	30

Panel A
Data on membership from all denominations are taken from the 1936 Religious Census, Volume 1, Tables 23 and 26. The "Our denominations" data set includes the denominations listed in Table 1. The population of the United States in 1936 and 1926 was approximately 120 million and 117 million, respectively. The modified church and membership data in 1936 reflect the true size of the Southern Baptist Convention.
Panel B
Data on operating and benevolent expenditures are taken from the 1936 Religious Census, Volume 1, Table 15, and the 1926 Religious Census, Volume 1 Table 15. Membership data taken from 1936 Religious Census, Volume 1, Tables 23 and 26; the membership data from the SBC are "modified" as in the last column of Panel A. In some cases the sum of the expenditure breakdowns differs slightly from the total expenditures; this is due to rounding. Modified expenditures remove spending data for the Methodist Episcopal Church and the Methodist Episcopal Church, South.
Panel C
The table shows the percent of non-operating expenditures devoted to a given category for different groups of denominations. Data come from the 1936 Religious Census, Volume 1, Table 15.

yearbook figure that we use, which is 11,000 churches and 1.8 million members higher. Correcting the 1936 census data changes the ratios to 24% of churches and 18% of members, which are closer to the 1926 figures. These corrected church and membership data are shown in the last two columns of Panel A.

Panel B of Table 2 shows a comparison of financial data for our denominations relative to the full set of denominations on a per member basis (membership data is "modified" as in the last column of Panel A). Overall expenditures per member are somewhat higher for our denominations, especially in 1926. The division into operating expenditures and benevolences is similar, however. In our set of denominations, benevolences amounted to 22% of total expenditures in 1926 ($4.71/$21.71), compared to 18% nationwide. Benevolences fell faster in our set of denominations than overall over this period, declining by 53% in our set (from $4.71 to $2.18) but only 36% nationally.

This discrepancy may arise from non-random attrition between the 1926 and 1936 samples. For example, the two main Methodist denominations, the Methodist Episcopal Church and the Methodist Episcopal Church, South, had 29.8% and 36.7% fewer churches reporting in 1936 than in 1926, respectively. These were two of the largest denominations in the country and both had below average levels of per member benevolences compared to other churches. Their low response rate in 1936 may thus lessen the apparent decrease in spending observed for all churches that year.

The rightmost column in Panel B addresses this issue by excluding these Methodist churches from both years. With this change, benevolence spending for all denominations declines by 47% between 1936 and 1926—a decline much closer to the figure for our subsample of denominations.

The 1936 census also collected more detail on church expenditures that can allow us to explore in more detail our measure of benevolences. In Panel C of Table 2, we divide our total measure of benevolent spending into three components: Home Missions and Local Relief, Foreign Missions and spending sent to denominational "Headquarters," and other benevolent spending.

While the first category clearly represents local charitable activities, we do not have good information about the charitable content of the remaining categories. It is very likely that in some cases important local relief spending does in fact fall into the "spending to Headquarters" category. For example, if a local orphanage is financed primarily by denomination-level support, the funding would come from spending to the denominations headquarters. Furthermore, some churches (such as in the CCC) can credit local charitable spending towards their apportioned spending to headquarters, and it is unclear how such spending would be categorized here. We also have little information on "other expenditures". As Panel C of Table 2 shows, the share of spending on Home Missions and Local Relief is quite similar in our set of denominations to the national totals. Our denominations do have more spending on Foreign Missions and spending to Headquarters, and less on other categories.

Thus, our measure of benevolences may capture activities beyond local charity, which are not responsive to local government relief spending. To the extent that our variable is noisy because of additional spending, and to the extent that there is substitution within different spending categories in response to the New Deal, our results may be biased towards zero.[6] Given this broad measure of benevolence, we are likely estimating a lower bound for crowd-out.

[6] A similar bias could arise if charitable church activity involved in-kind provision of services and volunteering that is not captured by our spending data.

2.2. New deal transfers

Our other major data element for our analysis is information on relief spending under the New Deal. These spending data cover nearly all of the public relief spending undertaken during the great depression: General Relief spending (including spending undertaken by Federal Emergency Relief Administration, FERA), Work Relief spending (including spending undertaken by the Works Progress Administration, WPA, and the Civil Works Administration, CWA), Aid to Dependent Children, Aid to the Blind, Old Age Assistance, and local poor relief spending. Spending data include both federal spending and matching state spending under these programs. Appendix B in the working paper (Gruber and Hungerman, 2005) provides more information on the sources of these spending data.

The spending data are available for each state and each year, from 1933 to 1939. Prior to 1933, relief spending data are not available and are set to zero. This should not be a large problem given that public relief spending was relatively small before the New Deal. The exclusion of pre-1933 relief spending may lead to an overestimate of the rise in government spending coinciding with the New Deal, which in turn will lead to underestimates of how each additional dollar of spending affected church activity.[7]

2.3. Means

Table 3 shows the summary statistics for our data set. Means are weighted by church members; monetary figures are in 1929 dollars. Benevolences—essentially all spending by churches exclusive of operating expenditures—averages $2.63 per member. Per capita relief spending is $10.76, but this figure is artificially low given that relief spending is set to zero before 1933 (as discussed above). The average of per capita public-relief spending from 1933 onwards is $16.44 (the mean of per member benevolences over the same period is $2.30). Total New Deal relief spending was about $14 billion, or about $2 billion a year. This figure is comparable to those in other studies (e.g., Wallis et al., 2005).

The mean of per member charitable spending may seem somewhat small, but it should be noted that per capita personal income at the time was only $520. If one extrapolated our spending figures to other denominations, in most years benevolences would be a little under 10% of New Deal relief spending, a sizeable fraction.

The remaining variables include demographic characteristics such as the percent of the state population black, the percent of 7–13 year olds attending school, the percent of women widowed, the number of farms per capita, the percent foreign-born, the percent under age 18, the percent over 65, the population density, and the log of the state's population. The population data come annually from the BEA, the other demographic variables are taken from the decennial census and linearly interpolated. We attempt to control for the economic conditions of a state using per capita personal income, and an employment index developed by Wallis (1989). This index measures employment levels for each state and each year, with 1929 benchmarked to 100 for all states. We also control for the percent of a state's voters voting democratic in the previous presidential election; this variable and political indices based on it have been included in many other studies of the New Deal (e.g., Wright, 1974; Couch and Shughart, 1998; Wallis, 1998). We also include the tenure of a state's representatives who are on the House Appropriations Committee. We will discuss this last variable more below.

[7] The magnitude of this overestimated growth in government spending, and therefore the magnitude of the bias, could depend upon a number of factors, including the presence of a "flypaper effect" from federal spending.

3. Empirical strategy

3.1. Regression framework

Our analysis begins by estimating regressions of the form:

$$\text{CHSPEND}_{dst} = \alpha + \beta\text{GOVSPEND}_{st} + \delta X_{dst} + \gamma Z_{st} + \eta_{dt} + \lambda_{ds} + \mu_{rt} + \in_{dst}$$

where CHSPEND is the level of per member benevolent spending in denomination d, in state s, in year t; GOVSPEND is the level government relief spending in state s in year t; X is a set of controls for other denomination/state/year characteristics; Z is a set of controls for other state/year characteristics; λ_{ds} is a set of fixed effects for each denomination in each state; η_{dt} is a set of fixed effects for each denomination in each year; and μ_{rt} are fixed effects for each of the nine census regions of the country in each year. If there is crowd-out of church spending by government spending, then $\beta<0$.

Church benevolent spending is expressed in per member terms because of the incomplete coverage of our sample. In some states, we have a large share of all church-goers; in other states, we only have a smaller share. For example, in Utah the members in our 6 denominations make up barely 1% of the population, whereas in North Carolina the members in our 6 denominations make up 17% of the population. By normalizing by members, we allow a comparable measure across our units of observation. If these denominations are representative of other denominations in terms of the crowd-out effects of government spending, then our giving per member results can be extrapolated to compute an aggregate crowd-out estimate. Government transfer spending is expressed in per capita terms since we assume that church benevolence is responding to the generosity of government transfers per citizen.

Table 3
Summary statistics

Variable	Mean	Std. dev.	Min	Max
Per-member benevolences	2.63	1.96	0	46.33
Per-capita government relief spending	10.76	11.47	0	46.69
Percent black	13.84	14.31	0.03	50.44
Percent of 7–13 year olds attending school	94.13	4.83	65.51	98.36
Percent of females over 15 widowed	11.40	1.19	6.85	14.31
Farms per capita	0.06	0.03	0	0.16
Percent foreign-born	7.27	7.55	0.26	25.50
Percent under age 18	35.10	4.74	24.30	46.20
Percent over 65	5.67	1.32	3.27	9.48
Population density	108.06	125.77	0.79	671.18
Employment index, 1929 = 100 (from Wallis, 1989)	91.36	12.32	44.20	137.60
Per-capita personal income (1000s)	0.53	0.22	0.16	1.15
Population (1000s)	4349.81	3091.01	90	13523
Tenure of House members on Appropriations Committee (months)	123.83	125.48	0	640
State percent voting democratic in last presidential election	60.05	17.65	27	99
Churches	1091.67	936.29	7	3235
Members (1000s)	214.74	173.74	0.41	731

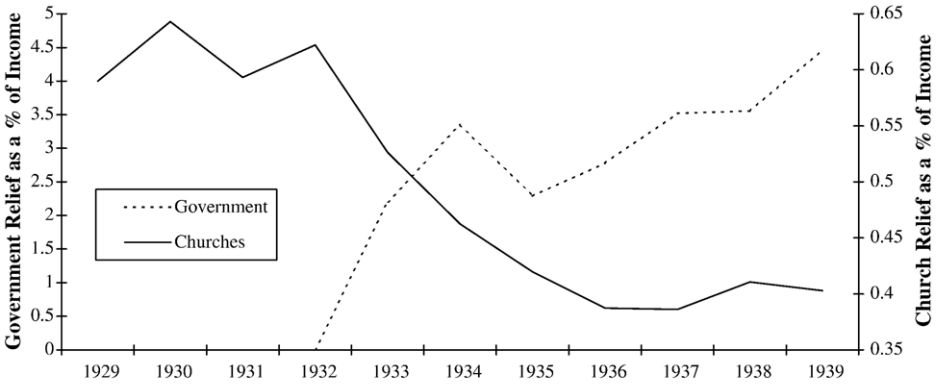
Observations: 1747. Monetary figures in year 1929 dollars. Statistics are weighted by membership. Only one observation reports zero dollars worth of benevolences (the CCC in Kentucky in 1938). Public relief payments are zero before 1932; average per capita public relief payments from 1933 to 1939 are $16.44. The mean of per member benevolences from 1933 to 1939 is $2.30.

We also control for characteristics varying at the denomination/state/year level, such as the number of churches and church members (both logged). Controlling for number of members and number of churches may help address issues that may affect per member giving, such as free-riding within churches (controls for both members and churches in logs allows for more flexibility in studying this issue than would simply putting the number of members per church for each observation on the right hand side). Controls at the state/year level include the aforementioned controls for age, race, education, and economic conditions shown in Table 3.

Our model includes fixed effects for each denomination * state cell. This allows us to control for any secular differences in giving across areas, across denominations, and even across areas within a denomination. Indeed, different units of analysis even within a denomination may have very different tastes for benevolent activity. For example, within the PCUSA denomination in 1931, the level of benevolent activity per member varied from a low of $0.44 in South Carolina to a high of $9.77 in Kentucky. Our denomination * state controls will capture this heterogeneity, to the extent that it is fixed over our sample period. In addition, there may be important denomination-specific trends in charitable activity. We therefore also include a full set of denomination * year interactions in the model as well.

A more fundamental concern is the possibility of an important unobserved determinant of both government spending and church benevolence—economic conditions in the state. States that are hit harder by the great depression would naturally be expected to receive more government transfers. At the same time, economic conditions have two potential effects on church benevolence. On the one hand, a recession would lead to more demand for church benevolence, which could raise church spending levels, leading to a positive correlation between government spending and church spending. On the other hand, a recession would lower personal incomes and therefore church contributions, lowering the potential supply of church benevolence, leading to a negative correlation between government spending and church spending. In either case, unobserved differences in economic performance across states could lead to bias in the crowd-out estimates.

A suggestion that this correlation is *not* driving our results can be found in the time series graph in Fig. 1. The Great Depression began in 1929, while New Deal spending did not begin until 1933. Thus, if economic factors, and not government spending, were driving downward church benevolent activity, it should become apparent in the years between 1929 and 1933. Yet, as is clear from Fig. 1, even as incomes fell the fraction of resources church members devoted to



Income is personal income. Church relief is per member, as a percent of per capita income, and is calculated as a (membership-weighted) average across denominations.

Fig. 1. Government and church relief during the great depression.

relief was fairly flat until 1933 (note that government relief and church relief are measured on separate axes in the picture). There is a very sharp decline in 1933, however, which coincides exactly with the start of the New Deal. (The slight spike in New Deal spending in 1934 is driven by the brief but massive Civil Works Program, which was in operation during the winter of that year.) The picture therefore argues for a more complex story than one where economic conditions led to a spurious decline in church activity during this time period.

Nevertheless, we include the available controls for economic conditions discussed above in our models to capture the differential effects of the depression across the states. We also undertake three additional steps to address this concern:

3.2. Region * year interactions

First, we include in our regression a full set of region * year interactions, where regions are the nine different areas of the country defined by the Census Bureau. Thus, to the extent that economic shocks are region-wide, we control for them, and only identify our model using variation in government spending over time by state within a region.

3.3. Instrumental variables strategy

We also pursue an instrumental variables strategy to account for the endogeneity of government spending. We follow Couch and Shughart (1998), Anderson and Tollison, (1991), Fishback, Haines, Kantor, (2002), and Wallis (1998) in using the power of the state's congressional delegation as an instrument for the distribution of New Deal spending. Couch and Shughart (1998) point out that in the 1930s an Office of Management and Budget had not yet been established in the executive branch, and Congress therefore played an even larger role in influencing expenditures than is the case today. Anderson and Tollison (1991) argue that spending was strongly influenced by Appropriations Committees, which crafted bills before they were submitted to Congress.[8] We therefore use as our instrument the tenure of a state's congressional representatives who were on the Appropriations Committee. (As in previous research, if a state did not have an individual on the committee, its tenure is set to zero). The instrument is measured in months, from the time a representative took office through the present.[9] The data used to make the instrument were made available by John Wallis and were supplemented by the Official Congressional Directory. [10] Appendix Table A4 shows tenure by

[8] For more information on the history and influence of the Appropriations Committee, see Stewart III (1995).

[9] It is possible that it is not absolute tenure on the committee that should determine power, but rather the relative tenure of individuals on the committee or the number of individuals on the committee. Estimates using an instrument that simply ranks committee members based on their tenure, or estimates using an instrument that simply equals the number of individuals in a state on the committee, yield results similar to those shown below.

[10] Previous research has considered a number of other measures of congressional influence. Our results are robust to including other measures of congressional influence, such as those used by Wallis (1998) and Anderson and Tollison (1991). However, most other measures are weak in the first stage, or are significant and correctly signed but driven by very little variation. For example, Anderson and Tollison include measures of leadership in the House and Senate, and like them we find a positive and significant effect on spending of a state having a senator who is majority leader or president pro tem. However, given controls for state fixed effects, this result is driven entirely by a change in the Senate majority leadership position from Arkansas' Joseph Robinson to Kentucky's Alben Barkley in 1937. Adding chairmanship in the Appropriations Committee as an instrument does not change the results but is also driven by little variation. We therefore focus on the more robust variation available with the appropriations committee tenure instrument.

state and month over the sample and confirms that the committee had significant variation in tenure across states and time.

Of course, if Congress influenced total New Deal spending in the same manner that it influenced New Deal relief spending, then we will understate the financial flows into states, and may therefore overstate crowd-out effects if church spending responded to other aspects of the New Deal. Relief spending was the majority (more than 60%) of total New Deal spending, but there was other spending through agencies such as the Public Works Administration, which constructed dams, airports, hospitals, and other public works. Yet Couch and Shugart (1998) show that this same channel does not appear to have operated for other aspects of New Deal spending.[11]

One reason that relief spending may have been particularly sensitive to political considerations is that the FERA, the CWA, and the WPA were all directed by Harry Hopkins. Hopkins had a large degree of influence on the administration of funds in these programs (Wallis et al., 2005). With regard to the WPA, the largest of these programs, Hopkins had discretion in allocating funds and the criteria he employed to distribute the funds were clandestine. The New York Times of December 29, 1938, wrote, "The allocation of WPA funds cannot indefinitely be permitted to rest upon the personal discretion of any one man or small group of men. The relief funds belong to the whole country. Their allotment must be placed upon a basis that the whole country understands clearly and accepts as fair" (New York Times, 1938). When called before a special congressional committee to discuss the geographical distribution of work created by the WPA, he stated, "A lot of this is nothing but a matter of opinion. If somebody else were administering this and dividing up these 2,600,000 [jobs] among 48 states he might do it differently" (US Senate, 1938, p.1396).

Charles (1963) writes, "Hopkins devoted considerable attention to his relations with Congress," and that "congressmen who supported the work relief program" got "special attention." This is not surprising given that relief programs such as the FERA and WPA depended on annual appropriations and congressional reauthorization. Couch and Shugart provide evidence that states whose congressional representatives supported the initial legislation creating the WPA received more funds, all else equal. In essence, the Appropriations Committee controlled the size of the New Deal "pie", and Hopkins controlled its distribution. Past evidence suggests that Hopkins used his control over distribution to "buy" increases in the overall level of New Deal relief spending.

Of course, many of the same factors that are associated with the impact of the recession on a state may be associated with the tenure of its representatives on the Appropriations Committee. But recall that our model includes state fixed effects, so that we are identified off *changes* in the tenure. For example, at the start of 1937 the Appropriations Committee was headed by James P. Buchanan of Texas. Buchanan exercised considerable influence over spending decisions and President Roosevelt regularly consulted with him before bills were considered by the committee (Patenaude, 1983). Buchanan also used his role on the committee to influence the administration of New Deal programs in an effort to benefit his constituents. For example, the nation's first Social Security District Office was opened in Buchanan's hometown after he threatened the social security board with a 25% reduction to the Board's proposed budget (Dewitt, 2001).

However, in 1937 Buchanan died unexpectedly of a heart attack, leaving Texas with much less influence on the committee.[12] Incidentally, total New Deal relief spending in Texas (in constant dollars) fell by 15% the following year; a decline much larger than the average for other states

[11] See tables 8.3, 8.A1, and 8.A2 in Couch and Shughart (1998) for regressions on these other types of spending.

[12] Interestingly, both the chairman before and chairman after Buchanan also died in office.

(2.5%). At the same time, non-relief spending under the New Deal fell in Texas by an amount comparable to other states.

Of course, non-mortality related changes in tenure are potentially endogenous to economic conditions that drive church charitable activity. However, since New Deal spending did not begin until 1933, but our data start in 1929, we can further insulate ourselves from causality concerns by using as the excluded instrument not the appropriations tenure itself, but the *interaction* of tenure with a dummy for years 1933 and later. This allows us to actually include the appropriation tenure itself as a regressor, controlling for general unobserved correlation between changes in tenure and changes in church charitable activity, and to identify our model only from changes in the relation between appropriation tenure and charitable activity after 1933, relative to before.[13] Thus, the only way that omitted factors could bias this comparison would be if they were associated with changes in a state representative's tenure on the appropriations committee, and if they operated only after 1933 and not before.

3.4. Alternative instrument

Our final strategy for dealing with concerns over omitted determinants of government spending and church charitable giving is to consider the robustness of our findings to an alternative instrumental variables strategy: using the differential impact of the New Deal on states which faced different fiscal constraints when responding with their own matching spending. A number of New Deal programs provided matching grants to states to increase relief spending, so the impact of these programs was proportional to the extent to which states could raise those matching funds. Some states had a much more difficult time raising the matching funds than did other very comparable states, due to constitutional restrictions on the amount of debt that the state could incur. In these constitutionally restricted states, in fact, spending grew the most slowly when the New Deal was enacted. We therefore assess if benevolent church spending rose relatively in those states where government spending grew less due to debt restrictions.

4. Results

4.1. Basic results

Table 4 shows our main results. The standard errors in all regressions account for heteroskedasticity and are corrected for clustering at the state level, following the suggestion of Bertrand et al. (2004). All regressions include controls for denomination-by-year dummies, denomination-by-state dummies, and census region-by-year dummies.[14] Results are weighted by church membership.[15] The unit of observation is a given denomination in a particular state each year from 1929 to 1939.

[13] An important component of committee assignment and reassignment during this time period was the norm of seniority, whereby committee rank and retention was driven significantly by a member's seniority. Members could often stay on a standing committee as they wished. However, removal from office and new appointments contributed to variation in committee composition, as shown in Table A4. New appoint processes varied by party. See Smith and Deering (1984) for more information on committee appointment processes during this period.

[14] It should be clear that this set of dummy variables would subsume a simple set of year dummies.

[15] The estimate of crowd-out in an unweighted regression is close to the results reported here.

Table 4
Charitable church activity in the Great Depression

	(1) OLS	(2) First stage	(3) 2SLS	(4) First stage log–log	(5) 2SLS log–log
Per-capita government relief spending	−0.0233	–	−0.0571	–	−0.7699
	[0.0111]		[0.0287]		[0.4278]
House Appropriations * post 1932 dummy	–	0.0124	–	–	–
		[0.0032]			
House Appropriations	0.0003	−0.0042	0.0005	0.0004	–
	[0.0004]	[0.0032]	[0.0005]	[0.0001]	
Share voting democrat in last election	−0.0081	−0.1029	−0.0113	−0.0017	−0.0011
	[0.0049]	[0.0378]	[0.0053]	[0.0050]	[0.0061]
Percent black	−0.2828	1.5369	−0.2142	0.0882	0.099
	[0.1427]	[1.4267]	[0.1633]	[0.1277]	[0.1383]
Percent of 7–13 year olds attending school	0.0135	−0.0779	0.0123	−0.018	−0.0124
	[0.0067]	[0.0650]	[0.0067]	[0.0052]	[0.0083]
Percent of females over 15 widowed	0.4925	2.3755	0.5797	−0.0785	−0.2204
	[0.2747]	[2.0500]	[0.2419]	[0.2099]	[0.2118]
Farms per capita	9.6136	36.5739	10.5406	3.4385	9.4212
	[13.1585]	[96.4432]	[12.3902]	[8.7527]	[8.2988]
Percent foreign-born white	0.2232	−2.5857	0.1415	0.0188	−0.0316
	[0.1862]	[1.1289]	[0.1684]	[0.0799]	[0.0647]
Percent under age 18	0.1473	0.9205	0.1831	−0.0052	−0.0478
	[0.1025]	[0.8802]	[0.0917]	[0.0519]	[0.0515]
Percent age 65 and over	0.3851	6.7919	0.6031	0.353	0.4125
	[0.2560]	[1.5430]	[0.3354]	[0.1258]	[0.2460]
Population density	−0.0227	−0.0906	−0.0235	−0.0076	−0.0427
	[0.0223]	[0.2125]	[0.0192]	[0.0144]	[0.0150]
Employment index	0.0034	−0.0985	−0.0008	−0.0009	0.0007
	[0.0043]	[0.0313]	[0.0046]	[0.0037]	[0.0028]
Per-capita personal income	0.4476	−3.7544	0.1691	−0.2809	−0.0162
	[1.0684]	[8.8588]	[1.2143]	[0.6491]	[0.5293]
Churches logged	−0.4016	0.8348	−0.3921	−0.2068	0.5931
	[0.6054]	[1.4570]	[0.6186]	[0.1740]	[0.4489]
Members logged	0.6832	1.1334	0.7238	0.0484	−0.0061
	[0.6183]	[1.4883]	[0.6102]	[0.0953]	[0.2608]
Population logged	−4.4936	12.4442	−3.9244	−1.2317	−0.6701
	[2.8722]	[17.6421]	[2.5985]	[1.4630]	[1.3846]
Region * year dummies?	Yes	Yes	Yes	Yes	Yes
Denomination * state dummies?	Yes	Yes	Yes	Yes	Yes
Denomination * year dummies?	Yes	Yes	Yes	Yes	Yes
Observations	1747	1747	1747	1110	1110
R^2	0.83	0.98	–	0.98	–

Robust standard errors in brackets. Residuals are clustered at the state level. Regressions weighted by members. Regressions include conference fixed effects, region by year dummies, and denomination by year dummies. House Appropriations coefficient is tenure for a state's representatives who are on the Appropriations Committee. The dependent variable in columns 1, 3, and 5 is per member benevolent church spending. The dependent variable in columns 2 and 4 is per capita government relief spending.

Column 1 presents the OLS estimate of the impact of government relief spending on benevolent spending. The coefficient on government spending is negative, suggesting crowd-out, and statistically significant. The coefficient indicates that, for every dollar of government

spending per capita, benevolent church spending per member fell by 2.3 cents.[16] Over our sample period, roughly 50% of the population were church members.[17] Thus, if this coefficient can be extrapolated to denominations not covered by our sample, the result indicates that each dollar of government spending crowded-out 1.15 cents of church benevolence.

Table 4 reports the coefficients on the other explanatory variables included in the regression as well. There is no direct effect of (the non-interacted) house appropriations tenure variable. There is a negative effect on charitable activity of having more Democrats in the state and of having more blacks. There is a positive effect on the percent of children in school and the number of widowed females, perhaps reflecting sources of demand for charitable care. None of the remaining controls is significant.

As discussed earlier, there are a number of reasons to be suspicious of this OLS result. We therefore turn to the instrumental variables strategy discussed earlier. The second column of Table 4 shows the first stage. There is a very strong positive correlation between our instrument, the interaction of house appropriations committee tenure, and New Deal spending: each month of tenure leads to 1.2 cents more New Deal spending per capita. This is a reasonable estimate: averaging across all states and years, the typical state had a tenure on the appropriations committee of roughly 120 months, suggesting a mean effect of $1.50 per capita of New Deal spending due to appropriations committee tenure. That is, we estimate that about 10% of New Deal relief spending was allocated across states based on political considerations.

The third column shows the 2SLS estimates of our model. Instrumenting by appropriations tenure, interacted with a dummy for 1933 or later, yields a significant coefficient showing that each dollar of government spending per capita leads to 5.7 cents less church spending per member. Using the extrapolation approach from earlier, this finding suggests that each dollar of government spending lowered church benevolence by about 2.9 cents.

4.2. Interpretation

The 2SLS estimate in Table 4 clearly indicates a significant crowd-out of church benevolence by government spending. Yet the coefficient is small, with an estimated reduction in church benevolence of 2.9 cents per dollar of government spending. While small relative to New Deal spending, this finding is fairly large relative to the size of church benevolence. From 1929 to 1932, the last year before the New Deal, annual church benevolent spending in the U.S. averaged about $180 million. This is a little less than 10% as large as the average annual New Deal transfer spending over the 1933–1939 period of $2 billion. All else equal, the largest possible degree of crowd-out of church benevolence by the New Deal would have been ten cents per dollar of spending. Relative to this benchmark, then, crowd-out is roughly 30% of the total amount possible.

Another way to make this point is to examine the decline in benevolences after the New Deal. Per-member benevolences fell from $3.27 between 1929 and 1932 to $2.30 between 1933 and 1939. If one calculates fitted values based on the main regression (column 3 of Table 4) while constraining government spending to be zero, predicted benevolences from 1933 to 1939 is $3.24

[16] We have also estimated regressions with total spending (not per member) and the results are robust to such a specification. Moreover, the log–log specification shown in this table controls for log members on the right-hand side and consequently can be interpreted as an effect on total expenditures.

[17] The 1926 Census of religion, which has the most reliable estimates of church membership, reports that membership was equal to 47% of the population in that year.

per member. The data suggest that the New Deal can explain essentially the entire decline in church activity during the period 1933 to 1939. This conclusion is consistent with Fig. 1: benevolent spending remained relatively strong during the worst part of the great depression (1929–1932), but not after the government raised relief spending starting in 1933.

In monetary terms, if the typical church had spent about a dollar more per member on relief over this time period (as would have been the case with no New Deal), then without the New Deal church activity would have been $385 million higher (in 1929 dollars) over this time period—about $4 billion in year 2000 dollars. The New Deal crowded-out a substantial amount of benevolent spending by churches.

Yet another way to see this point is to use a different framework, estimating a log–log model of church benevolence on New Deal transfer spending. Since the latter was zero until 1933, we can only estimate this model from 1933–1939. Thus, we use a more restrictive version of the instrument which is just appropriations tenure itself. We show the first stage from such a model in column 4 of Table 4, and the 2SLS estimates in column 5. The instrument is highly significant, while the 2SLS estimate is significant at about the 8% level. The estimated coefficient on the log of government spending per capita is −0.77. Given that church spending was a little less than 10% of public relief spending over this time, an elasticity of 0.77 suggests that at the mean crowd-out was about seven cents on the dollar.

5. Sensitivity checks

In this section, we consider a variety of alternative specifications designed to assess the robustness of our central crowd-out finding. In each case, we show the coefficient of interest from full regression specifications such as those shown above.

5.1. Sensitivity to denomination

One concern about the findings may be that they are driven by one particular denomination. While the relatively small sample sizes of each denomination make repeating the standard regression on a case-by-case basis problematic, we can address this concern by repeating the standard regression dropping one denomination at a time. Table 5 shows the results of this exercise. The estimates are strikingly robust to variations in the set of denominations. The coefficient in all cases is close to the spending coefficient in column 3 of Table 4. In four of the six

Table 5
Sensitivity to denomination

	No CCC	No LCMS	No NBC	No PCUS	No PCUSA	No SBC
Per-capita government relief spending	−0.0672	−0.0609	−0.0512	−0.0534	−0.041	−0.0697
	[0.0355]	[0.0365]	[0.0360]	[0.0274]	[0.0310]	[0.0364]
Region * year dummies?	Yes	Yes	Yes	Yes	Yes	Yes
Denomination * state dummies?	Yes	Yes	Yes	Yes	Yes	Yes
Denomination * year dummies?	Yes	Yes	Yes	Yes	Yes	Yes
Includes all regressors?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1340	1604	1374	1582	1285	1550

Robust standard errors in brackets. Residuals are clustered at the state level. Regressions weighted by members. These regressions are 2SLS regressions and include all of the controls used in column 3 of Table 4. See notes to Table 4 for more details.

cases the coefficient remains at least marginally significant, and it always remains at least 1.33 times as large as its standard error. Our results are not driven by only one denomination.

5.2. Operating expenses

Some of the alternative hypotheses for our findings also have implications for other church expenditures. For example, if our results are driven by the fact that donations to churches fall as the economy sours, then churches should not only reduce benevolent activity, but also other spending as well (unless the incidence of lower donations is 100% on church benevolence). We can therefore test for this alternative by replacing our dependent variable with church operating expenditures per member, rather than church benevolence per member. An additional virtue of this regression is that it can speak to the question of whether churches shifted spending from benevolences to other categories, or whether overall spending fell.

As the first column of Table 6 shows, there is a positive effect of New Deal spending on operating expenditures. This is inconsistent with the alternative hypothesis for our finding, and consistent with church shifting of spending to operating expenditures. The coefficient is very imprecisely estimated, however, so that we cannot draw any strong inferences from the finding.

5.3. Religious census data

As noted earlier, there are data available for 1926 and 1936 on benevolent activity from the Religious Census. The advantages of this data set include the fact that the data cover all states and virtually all denominations in the country. The disadvantages of the data set include the facts that

Table 6
Robustness checks

	(1) On operating expenses	(2) Religious census	(3) Religious census	(4) First stage with debt instrument	(5) 2SLS with debt instrument	(6) 2SLS with debt and house instruments
Per-capita government relief spending	0.2073	−0.0381	−0.0442		−0.1238	−0.0835
	[0.2089]	[0.0277]	[0.0174]		[0.0427]	[0.0300]
Debt constraint dummy * post 1932 dummy				−2.581		
				[1.0456]		
State dummies?	No	Yes	Yes	No	No	No
Year dummy?	No	No	Yes	No	No	No
Region * year dummies?	Yes	Yes	No	Yes	Yes	Yes
Denomination * state dummies?	Yes	No	No	Yes	Yes	Yes
Denomination * year dummies?	Yes	No	No	Yes	Yes	Yes
Includes all regressors?	Yes	Yes [a]	Yes [a]	Yes	Yes	Yes
Observations	1747	96	96	1747	1747	1747

Robust standard errors in brackets. Regressions weighted by members. Overidentification test for the regression using both instruments: (Chi-squared with one degree of freedom): 1.035, $p=0.309$. These regressions include all of the controls used in Table 4, except as noted. See notes to Table 4 for more details. The first stage for column 6 has coefficients of 0.0107 [0.0032] and −2.028 [1.068] for the appropriations and debt instruments, respectively. A joint test of their significance yields a test statistic of $F(2, 47)-8.24$, $p=0.0009$.

[a] Data on employment and personal income are not available in 1926 and are excluded for these regressions.

it cannot be broken down by denominations across states (and thus the sample sizes are small); that it only includes two years; that participation in the census was lower in 1936, with potentially non-random attrition between the two years; and that our economic controls are not available for 1926, so we cannot include them in the model.

The next two columns of Table 6 use these religious census data rather than our church yearbook data. The second column of Table 6 shows our basic 2SLS estimates using the religious census. The coefficient is −0.038, which is about two-thirds as large as the coefficient using the higher quality data from our six denominations. But the coefficient is not statistically significant. In the next column, we replicate our previous analysis, but exclude the region * year interactions, which use up much of the variation in this limited data set (with only two years of data). In this case, the coefficient increases slightly in absolute value and becomes statistically significant. Thus, these data are consistent with the significant crowd-out of government spending, albeit at a somewhat lower level.

5.4. Alternative instrumental variables strategy: state debt limitations

Our key identifying assumption for this analysis, as discussed earlier, is that changes in appropriations committee tenure, after 1933 relative to before, are exogenous with respect to church charitable activity. To further test our findings, we pursue another instrumental variables strategy, using variation across states in the ease with which they could use debt to finance the state matching spending required to take advantage of the New Deal.

During the great depression, a number of states faced restrictions on using debt to finance relief spending or government spending in general. These restrictions usually took one of two forms: state law required a constitutional amendment to authorize debt financing (in 23 states) or required referendum approval (15 states).[18]

These restrictions likely impacted a state's ability finance relief spending (Shawe, 1936). As Wallis (1984) points out, "all of the relief programs, except the CCC, were jointly financed by federal, state, and local governments. Each program required explicit or implicit matching of federal funds for state and local contributions." Wallis (1984) shows that for relief spending, increases in state expenditures lead to increases in federal grants (see also Couch and Shughart, 1998, page 203). The federal government itself noted that, "the terms on which Federal aid is available are not such as to foster a distribution of funds in full accordance with need and capacity," and in particular given the importance of state matching, "the less money a State can afford to raise, the less Federal aid will it receive" (National Resource Planning Board, 1942, page 475).

Of course, states had an incentive to try to get around these fiscal restrictions. For example, Shawe (1936) writes, "A favorite method of overcoming constitutional limitations on borrowing powers is the creation by State legislatures of special tax 'districts' or 'corporations' for the purpose of public improvements, etc." Shaw provides a list of states exploiting such loopholes; we will consider these loopholes in the analysis.

Fig. 2 shows the variation in state debt limits across the country. The darkest areas have the fewest restrictions. The black states require only approval by the state legislature to incur debt. The dark-gray areas are areas where states exploit the corporation and division loopholes mentioned above. These two types of states will be considered free of fiscal constraints in the regressions. Among the other states, the light gray states are those requiring referendums to incur

[18] Data on states facing restrictions come from table G-2 of Shawe (1936).

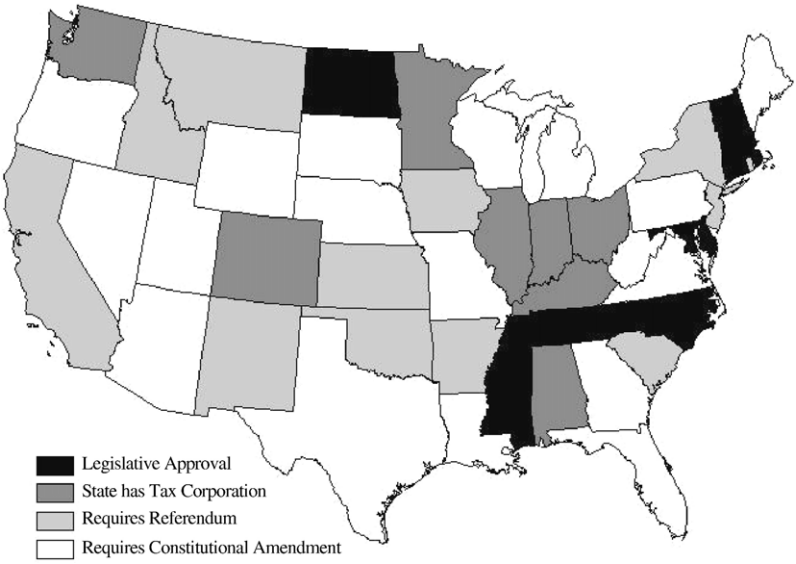


Fig. 2. State limits on financing relief with debt.

debt and the white states are those requiring a constitutional amendment. These last two groups will be the ones considered facing fiscal constraints in the regressions; they make up 30 out of 48 states and about 2/3 of the observations.

Once again, our model includes state fixed effects, so we are not simply comparing states with and without these debt limits. Rather, we use as instruments an interaction of the dummy for restrictive debt rules with a dummy for the year being 1933 or later, which is when the matching implications of these restrictions became relevant. Thus, this strategy compares the changes in church benevolent spending around the start of the New Deal in states poised to take advantage of the matching grants provided by the federal spending versus those who were less able to do so.

These two sets of states are very similar along observable dimensions before the New Deal, as shown in Table 7, which tabulates mean characteristics of the two sets of states from 1929 to 1933. The two sets of states appear almost identical in economic terms, with very similar per capita income, farms per capita, and employment index scores. They are also similar along most demographic dimensions, such as percent of the population that are children, percent of the population that is elderly, percent of 7–13 year olds enrolled in school, percent of females widowed, and percent of the state voting Democrat in the previous election. The only sizeable difference between the states is in population density, which is higher in states without a debt limit. Fortunately, however, differences in population density do not appear to be associated with charitable giving in our earlier models, so it seems likely that this is not an important source of heterogeneity across the groups of states.

The fourth column of Table 6 shows the first stage regression for this instrument, using the denomination-level data set.[19] There is a significant and sizeable negative impact of having constraining debt limits on New Deal spending at the state level, with states with such limits

[19] Using this instrument with the Religious Census data set yields coefficients very similar to the original ones, although the results are somewhat imprecise.

Table 7
State summary statistics by debt limit: 1929–1933

	Limit	No limit
Share voting democratic	45.51	45.63
	[14.17]	[11.08]
Percent black	12.84	14.84
	[13.99]	[15.28]
Percent 7–13 year olds in school	94.23	94.29
	[4.09]	[3.79]
Percent females over 15 widowed	11.26	11.19
	[1.41]	[0.95]
Farms per capita	0.06	0.07
	[0.03]	[0.04]
Percent foreign-born	8.27	7.78
	[8.04]	[8.41]
Percent under 18	36.22	36.99
	[4.44]	[4.82]
Percent over 65	5.17	5.31
	[1.20]	[1.23]
Population density	100.60	121.20
	[123.54]	[130.50]
Employment index	90.01	87.66
	[9.38]	[10.70]
Per-capita income	0.54	0.49
	[0.23]	[0.24]
Total Observations	408	228

Standard deviations in brackets. Means are weighted by membership.

spending $2.58 less per capita.[20] The next column shows the results of our 2SLS equation using this alternative instrument. The results here are also negative and significant, and larger in absolute value than the results using our other instrument: they suggest that each dollar of New Deal spending per capita leads to 12.4 cents less benevolence per member, for an implied crowd-out estimate of 6.2 cents per dollar of government spending.

Column 6 of Table 6 combines these two instruments, and produces a crowd-out estimate of 8.4 cents reduced benevolence per member, or 4.1 cents per dollar of government spending.[21] As noted below Table 6, this specification easily passes a test of overidentifying restrictions, as should have been clear from the similarity of the coefficients in the previous two columns (the sample correlation between the two instruments is a modest 0.29). Thus, an alternative identification strategy suggests even larger crowd-out than does our use of appropriations committee tenure.[22]

[20] As mentioned earlier, we do not have data on public relief spending prior to 1933. If one assumes that the level of relief spending, all things equal, was actually lower in constrained states before 1933, then our first stage coefficient overestimates the effect of the constraints. Our second stage coefficient will therefore be biased towards zero.

[21] Repeating the regressions in the first three columns of this table with both instruments produces similar and somewhat more precise estimates than those shown.

[22] The results from this instrument are more sensitive to the exclusion of particular denominations, however: the estimate is close to zero when the PCUSA denomination is excluded, while it is almost twice as large when the LCMS is excluded. Nevertheless, in five of the six cases of excluding particular denominations the coefficient remains significant and in all cases it is correctly signed.

6. Conclusions

Religious bodies in the U.S. have been, and will continue to be, important providers of social services. Yet the role of religious organizations as providers of charitable activity shrank significantly during the 1930s, the period of government growth through the New Deal. In this paper, we assess the causal link between these trends. We do so by exploiting the fact that a major determinant of New Deal transfers was the political power of a state's congressional delegation, in particular the tenure of a state's politicians on the House Appropriations Committee. States that saw an increase in the tenure of their representatives on the Appropriations Committee, after 1932 relative to before, saw a large rise in New Deal spending. These same states saw a sizeable decline in the level of their expenditures on benevolences. We verify the robustness of this finding in a number of ways, including the consideration of a very different instrument, showing that state debt limits led to a slower growth of New Deal spending and a slower decline of church benevolent spending.

Our data suggest that churches played an important role in providing services to the needy before the rise of the welfare state. Additionally, our estimates confirm that government spending did crowd-out some church spending. Relative to the total level of New Deal spending, this crowd-out was quite small, amounting to only 3% of total spending. Relative to total church benevolent spending, however, the crowd-out was large, amounting to 30% of church benevolent spending, and explaining essentially all of the one-third decline in church benevolent spending over the 1933–1939 period. These results may have important implications for the optimal division of charitable activity between the government and the private sector. If churches are superior providers of social services, then the government is imposing a sizeable cost by providing those services itself. At the same time, crowd-out is far less than full, and overall provision would be likely to fall significantly if the government retrenches. Unless church provision is many times more efficient than government provision, reductions in government provision will result in an overall reduction in charity in the U.S.

There are a number of questions left unaddressed by our analysis that could be useful subjects for future work. First, we are using a rough categorization of church benevolences, and it would be helpful to use more detailed data to investigate which components of church spending are responding to government spending, and whether there are substitutions across the components included in our measure (in which case our estimate is biased downwards). More information is also needed to see whether crowd-out is driven by changes in donations or in spending allocation, an ambiguity discussed in Andreoni and Payne (2003). Our regression on operating expenses does not provide any firm conclusions here (a similar ambiguity is found by Hungerman, 2005).

Second, like many other papers our estimates suggest that crowd-out from government spending is small. But our main results differ substantially from the only other paper looking at crowd-out between religion and government, by Hungerman (2005), which finds crowd-out of 20–38%. This may be due to the fact that he is examining a small decrease in government spending, while we study a massive increase. Further exploration is needed into church responsiveness to spending increases vs. decreases, and non-linearities in that responsiveness.

Finally, while churches remain an important source of social services, providing over $24 billion in philanthropic services annually (Biddle, 1992), church charitable giving is only one element of private charity that might be crowded-out by government intervention. Organizations in the "human services" subsector of the non-profit field (such as food banks and the Red Cross) had revenues exceeding $54 billion in the year 2000 (Center on Philanthropy, 2004). If these

organizations and other charitable providers respond in similar ways to changes in government spending, the total amount of crowd-out could be multiples of our finding.

Appendix A

Table A1
Definitions of benevolences

Denomination	Definition
Census of religion data set (multi-faith)	All expenditures other than (a) local operating expenditures, (b) capital expenditures, and (c) debt payments. Examples would include amounts given to home missions and local relief, spending on foreign missions, donations to denominational headquarters, and other benevolent spending.
Congregational Christian Churches	All apportioned and unapportioned expenditures on benevolence, including gifts to congregational and non-congregational enterprises. These enterprises would often be related to charity or church extension activities. Apportioned gifts could also be given to "authorized specials," which were expenditures made by a local church outside of their regular budgeted activities towards a mission or organization (often a Para-church organization) approved by the local church district.
Lutheran Church-Missouri Synod	All expenditures other than expenditures spent entirely within the congregation. Examples include expenditures on local ministry, local ecumenical agencies, denominational bodies, and the regional judicatory (also known as the district office; the district is the regional governing body of the LCMS). These expenditures include benevolences, and/or payments on apportionment.
Northern Baptist Convention	All denominational missions, including gifts to national societies and boards, home and foreign missions, the convention itself, the state convention, men's and women's societies, schools and colleges, and other charitable or benevolent activities.
Presbyterian Church in the USA	All payments made to any benevolent cause by all churches and all church societies, such as Youth and Women's Organizations. Includes apportioned expenditures made to Presbytery, Synod, and General Assembly organizations as well as expenditures given to ecumenical agencies.
Presbyterian Church in the United States	Congregational and presbytery missions. These are expenditures by congregations and presbyteries to support church expansion (such as financial support for new churches) and local charitable activity. Includes apportioned expenditures on Presbytery Missions.
Southern Baptist Convention	Total amount of money spent on mission expenditures, including monies given to national and international causes, all monies given to denominational and state convention organizations, and local church missions. These various missions would likely include activities for church extension and charitable activities. (This denomination does not use apportionment.)

See Appendix A in Gruber and Hungerman (2005) for information on data sources and construction.

Table A2
Definitions of membership

Denomination	Membership Definition
Congregational Christian Churches	The total number of members for all churches in the State—membership generally often involved assent to Kansas City Statement of Faith (similar to a confession of faith), or possibly a letter of transfer for individuals transferring from another CCC church. Membership is for adults, not children.
Lutheran Church-Missouri Synod	The number of members on role as baptized. This is a broader measure of membership than the "communicating members" category offered in the yearbook. Baptized members need not have reached an age suitable for completion of the confirmation program required for a member to become a communicant.

(continued on next page)

Table A2 (*continued*)

Denomination	Membership Definition
Northern Baptist Convention	The total number of members for all churches in the region. The definitions of membership used by local Northern Baptist churches are idiosyncratic.
Presbyterian Church in the USA	The number of resident and non-resident members or communicants in each church. These members generally had to make a profession of faith in Jesus Christ; this was usually done during adolescence or adulthood. Thus, this membership category does not include young children.
Presbyterian Church in the United States	Total number of communicants. Communicants generally had to make a profession of faith in Jesus Christ, this was usually done during adolescence or adulthood. Thus, this membership category does not include young children.
Southern Baptist Convention	This includes resident members and non-resident members. The primary rite to membership is baptism; memberships may therefore include baptized children (although the Baptists traditionally reject infant baptism). Other membership criteria, such as the need to take a membership class, vary from church to church.

See Appendix A in Gruber and Hungerman (2005) for information on data sources and construction.

Table A3
Geographic location of each denomination

State	CCC	LCMS	NBC	PCUS	PCUSA	SBC
Alabama	×			×	×	×
Arkansas				×	×	×
Arizona			×		×	×
California	×	×	×		×	
Colorado	×	×	×		×	
Connecticut	×		×		×	
Delaware			×			
Florida	×			×	×	×
Georgia	×			×	×	×
Iowa	×	×	×		×	
Idaho	×		×		×	
Illinois	×	×	×		×	×
Indiana	×		×		×	
Kansas	×	×	×		×	
Kentucky	×			×	×	×
Louisiana	×			×		×
Massachusetts	×		×		×	
Maryland					×	×
Maine	×		×			
Michigan	×	×	×		×	
Minnesota	×	×	×		×	
Missouri	×	×		×	×	×
Mississippi				×	×	×
Montana	×		×		×	
North Carolina	×			×	×	×
North Dakota	×		×		×	
Nebraska	×	×	×		×	
New Hampshire	×		×			
New Jersey			×		×	
New Mexico					×	×
Nevada			×		×	
New York	×		×		×	
Ohio	×		×		×	

Table A3 (*continued*)

State	CCC	LCMS	NBC	PCUS	PCUSA	SBC
Oklahoma	×	×	×	×	×	×
Oregon	×		×		×	
Pennsylvania	×		×		×	
Rhode Island	×		×			
South Carolina				×	×	×
South Dakota	×	×	×		×	
Tennessee	×			×	×	×
Texas	×	×		×	×	×
Utah	×		×		×	
Virginia				×	×	×
Vermont	×		×			
Washington	×		×		×	
Wisconsin	×	×	×		×	
West Virginia			×	×	×	
Wyoming	×		×		×	

Table A4
Tenure on appropriations committee, by state and year

State	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Alabama	166	178	190	202	214	226	238	250	0	36	48
Arkansas	0	0	0	130	142	154	166	178	0	48	61
Arizona	0	0	0	58	0	0	0	0	0	0	0
California	118	130	142	154	94	106	118	164	46	212	166
Colorado	356	380	404	428	286	298	310	322	334	346	358
Connecticut	0	0	0	0	26	38	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	52	70
Georgia	0	144	156	168	0	0	0	106	118	134	142
Iowa	118	130	142	0	116	140	164	188	142	0	0
Idaho	142	154	166	178	0	0	0	0	0	0	0
Illinois	116	222	258	212	188	212	236	118	24	94	118
Indiana	166	178	190	236	46	58	70	82	94	106	118
Kansas	332	82	94	106	164	188	70	82	94	142	166
Kentucky	131	82	94	106	22	34	46	152	24	36	48
Louisiana	94	106	118	130	142	154	166	181	0	82	94
Massachusetts	166	192	216	225	85	109	133	157	98	146	170
Maine	0	0	0	0	0	0	0	34	0	0	0
Michigan	190	202	214	0	133	157	142	154	24	72	96
Minnesota	94	106	118	130	0	0	0	0	0	0	0
Missouri	0	82	94	106	118	130	142	154	166	178	190
Mississippi	94	106	118	130	142	154	0	0	0	12	24
North Carolina	0	0	0	110	122	134	0	34	46	58	0
North Dakota	0	0	0	0	166	178	0	0	0	0	0
Nebraska	70	82	94	106	0	0	0	0	0	0	0
New Hampshire	166	178	190	202	0	0	0	0	0	0	0
New Jersey	118	130	142	0	0	10	22	34	46	58	70
Nevada	0	0	0	0	0	0	0	34	46	58	70
New York	260	388	436	378	532	580	628	544	616	640	332
Ohio	118	130	142	154	46	58	70	116	46	58	0
Oklahoma	70	82	94	106	118	130	0	58	118	82	142
Pennsylvania	210	212	236	154	70	92	22	68	92	238	286
South Carolina	0	0	0	0	94	106	118	130	142	154	166

(continued on next page)

Table A4 (*continued*)

State	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Tennessee	238	250	262	274	0	0	0	0	0	0	0
Texas	189	201	213	244	267	291	317	339	285	58	0
Virginia	70	82	94	106	118	130	142	154	166	178	190
Vermont	0	0	0	0	0	0	0	0	0	48	60
Washington	118	130	142	154	0	0	0	0	0	12	24
West Virginia	0	0	0	0	0	0	0	34	46	58	70

Table shows tenure in months of members on House Appropriations Committee; data taken from the Official Congressional Directory. The following states are not represented on the committee in any year: Delaware, Maryland, Montana, New Mexico, Oregon, Rhode Island, South Dakota, Utah, Wisconsin, and Wyoming. In a typical year there were between 35 and 40 members on the committee.

References

Abrams, Burton, Schmitz, Mark, 1984. The "crowding-out" effect of governmental transfers on private charitable contributions: cross-section evidence. National Tax Journal 37, 709–738.

Anderson, Gary, Tollison, Robert, 1991. Congressional influence and patterns of New Deal spending. Journal of Law & Economics 34, 161–175.

Andreoni, James, 1993. An experimental test of the public-goods crowding-out hypothesis. The American Economic Review 82, 1317–1327.

Andreoni, James, Payne, A. Abigail, 2003. Do government grants to private charities crowd out giving or fund raising? American Economic Review 93, 792–812.

Baird, Enid, Lynch, John, 1942. Public and Private Aid in 116 Urban Areas. Government Printing Office, Washington.

Bergstrom, Ted, Blume, Larry, Varian, Hal, 1986. On the private provision of public goods. Journal of Public Economics 29, 25–49.

Bertrand, Marianne, Duflo, Esther, Mullainathan, Sendhil, 2004. How much should we trust differences-in-differences estimates? Quarterly Journal of Economics 119, 249–275.

Biddle, Jeff, 1992. Religious organizations. In: Clotfelter, Charles T. (Ed.), Who Benefits from the Non-profit Sector? University of Chicago Press, Chicago.

Bureau of the Census, 1927. Financial Statistic of States: 1926. Government Printing Office, Washington.

Bureau of the Census, 1928. Financial Statistic of Cities Having a Population of Over 30,000: 1926. Government Printing Office, Washington.

Bureau of the Census, 1930. Religious Bodies: 1926. Volume I: Summary and Detailed Tables. Government Printing Office, Washington.

Charles, Searle F., 1963. Minister of Relief. Syracuse University Press, Syracuse, NY.

Center on Philanthrophy, 2004. Giving USA. AAFRC Trust for Philanthropy, New York.

Cnaan, Ram A., Wineburg, Robert, Boddie, Staphanie, 1999. The Newer Deal. Columbia University Press, New York.

Cnaan, Ram A., Boddie, Staphanie, Handy, Femida, Yancey, Gaynor, Schneider, Richard, 2002. The Invisible Caring Hand: American Congregations and the Provision of Welfare. New York University Press, New York.

Couch, Jim F., Shughart II, William F., 1998. The Political Economy of the New Deal. Edward Elgar, Cheltenham, UK.

DeWitt, Larry, 2001. How the First Social Security Field Office Came to be in Austin Texas. Social Security Research Note, vol. 10.

Dudley, Carl, Roozen, David, 2001. Faith communities today. Hartford Institute for Religious Research.

Fishback, Price, Haines, Micheal, Kantor, Shawn, 2002. The welfare of children during the great depression. NBER working paper, vol. 8902.

Gruber, Jonathan, Hungerman, Daniel, 2005. Faith-based charity and crowd out during the great depression. NBER working paper, vol. 11332.

Hodgkinson, Virginia A., Weitzman, Murray S., Kirsch, Aruthur D., 1988. From Belief to Commitment: The community Service Activities and Finances of Religious Congregations in the United States: Findings from a National Survey. Independent Sector, Washington.

Hungerman, Daniel M., 2005. Are Church and State substitutes? Evidence from the 1996 Welfare Reform. Journal of Public Economics 89, 2245–2267.

Johnson, Ernest F., 1930. The social work of the churches: a handbook of information. Department of Research and Education of the Federal Council of the Churches of Christ in America. New York City.
Katz, Micheal B., 1996. In the Shadow of the Poorhouse. Basic Books, New York.
Khanna, Jyoti, Sandler, Todd, 2000. Partners in giving: the crowding-in effects of UK government grants. European Economic Review 44, 1543–1556.
Khanna, Jyoti, Posnett, John, Sandler, Todd, 1995. Charity donations in the UK: new evidence based on panel data. Journal of Public Economics 56, 257–272.
Kingma, Bruce, 1989. An accurate measurement of the crowd out effect, income effect, and price effect for charitable contributions. Journal of Political Economy 93, 1197–1207.
Lindsey, Lawrence, Steinberg, Richard, 1990. Joint crowdout: an empirical study of the impact of Federal Grants on State Government expenditures and charitable donations. NBER working paper, vol. 3226.
National Resources Planning Board, 1942. Security, Work, and Relief Policies. US Government Printing Office, Washington.
New York Times, 1938. The Reform of Relief. Editorial, December 29, p. 18.
Okten, C., Weisbrod, B., 2000. Determinants of donations in private non-profit markets. Journal of Public Economics 75, 255–272.
Olasky, Marvin, 1992. The tragedy of American compassion. Regnery Gateway, Washington.
Patenaude, Lionel V., 1983. Texans, Politics, and the New Deal. Garland Publishing, New York.
Payne, Abigail A., 1998. Does the government crowd-out private donations? New evidence from a sample of non-profit firms. Journal of Public Economics 69, 323–345.
Reece, Williams S., 1979. Charitable contributions: new evidence on household behavior. American Economic Review 69, 142–151.
Roberts, Russell D., 1984. A positive model of private charity and public transfers. The Journal of Political Economy 92, 136–148.
Shawe, Earle K., 1936. An analysis of the legal limitations on the borrowing power of the State Governments. Monthly Report of the FERA (June), pp. 121–133.
Smith, Deering, 1984. Committees in Congress. Congressional Quarterly Inc, New York.
Steinberg, Richard, 1991. Does government spending crowd-out donations? Interpreting the evidence. Annals of Public and Cooperative Economics 62, 591–617.
Stewart III., Charles, 1995. Appropriations Committee, House. In: Bacon, Donald, Davison, Roger, Keller, Morton (Eds.), The Encyclopedia of the United States Congress, vol. 1. Simon & Schuster, New York.
Straub, John D., 2004. Fundraising and crowd-out of charitable contributions: new evidence from contributions to public radio. Working paper.
U.S. Senate, 1938. Special committee to investigate unemployment and relief ("Byrnes Committee"). Unemployment and Relief: Hearings Before a Special Committee to Investigate Unemployment and Relief. US Government Printing Office, Washington.
Wallis, John Joseph, 1984. The birth of old federalism: financing the New Deal, 1932–1940. The Journal of Economic History 44, 139–159.
Wallis, John Joseph, 1989. Employment in the great depression: new data and hypotheses. Explorations in Economic History 26, 45–72.
Wallis, John Joseph, 1998. The political economy of New Deal spending revisited, again: With and without Nevada. Explorations in Economic History 35, 140–170.
Wallis, John Joseph, Fishback, Price, Kantor, Shawn, 2005. Politics, relief, and reform: the transformation of America's Social Welfare System during the New Deal. NBER working paper, vol. 11080.
Winslow, Emma, 1937. Trends of Different Types of Public and Private Relief in Urban Areas, 1929–35. Government Printing Office, Washington.
Wright, Gavin, 1974. The political economy of New Deal spending: an econometric analysis. The Review of Economics and Statistics 6, 30–38.
Wuthnow, Robert, 2004. Saving America? Faith-Based Services and the Future of Civil Society. Princeton University Press, Princeton, NJ.