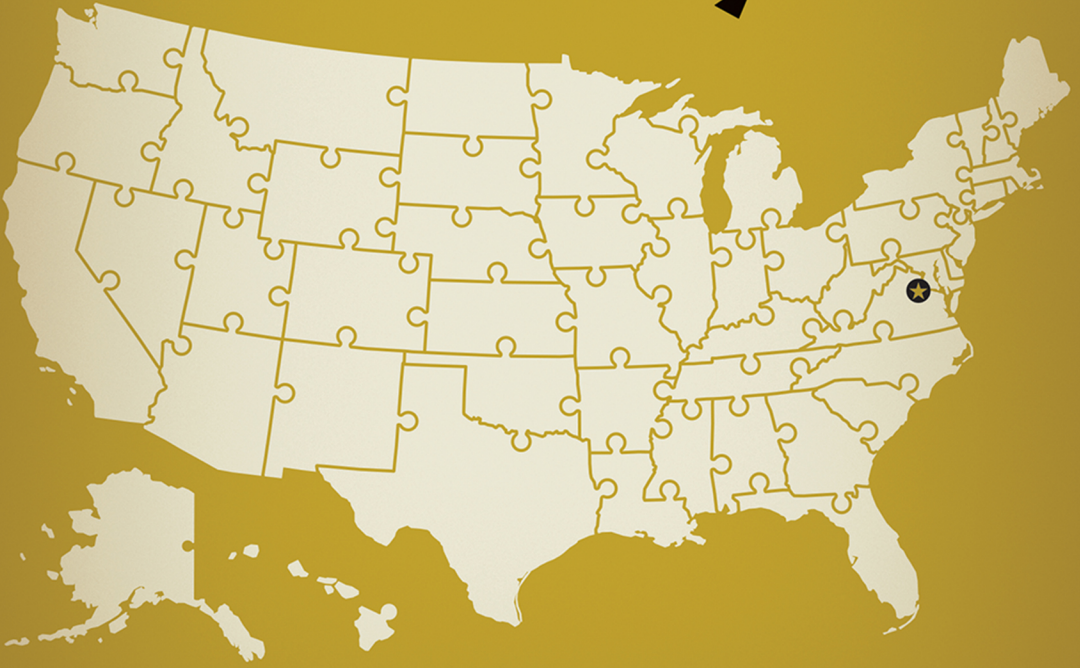


Perspectives on Political and Economic Governance

American Federalism Today



EDITED BY

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6

Recessions and Ratchets: Federal Funds and Public-Sector Employment

Jonathan Rodden

Introduction

Each of the most recent US recessions has spurred the federal government to assemble a large, temporary, ad hoc package of special intergovernmental grants for state governments. For the most part, these grants have not been targeted based on need. Rather, they have been distributed on a per capita basis, but with a very substantial bonus for small states. These packages have created a ratchet effect, such that each time, real per capita federal transfers to state governments stay above pre-recession levels, and states become more dependent on intergovernmental transfers.

A large cross-national literature in political economy observes that when subnational governments receive additional revenues, they tend to spend the vast majority of the windfall rather than reducing taxation or paying down debt. This is known as the “flypaper effect” (Hines and Thaler 1995; Inman 2008; Carlino et al. 2023). A number of studies indicate that a large share of unanticipated revenue windfalls is often spent on public employment (Larraín and Perelló 2019; Caselli and Michaels 2013).

More broadly, Wagner’s law states that government activity inevitably increases as economies grow (Wagner 1911). A related literature on “cyclical ratcheting” finds a tendency for the size of government to increase during recessions and to be only partially reduced during expansions (Hercowitz and Strawczynski 2004), in part because it is politically painful to eliminate public-sector employees, especially in the presence of vocal public-sector unions.

In light of these findings, and the fact that federal grants to states are ratcheting upward with each recent recession, we might expect to find that

public employment is also ratcheting upward. However, exactly the opposite has occurred. This chapter documents a rather striking contraction of public employment in the United States over the last twenty years in the wake of each successive recession. The sharp decline of the public-sector workforce in the United States stands out relative to other advanced industrial democracies.

Given the well-known political obstacles to cutting public employment, the contraction of the public sector in the United States is an interesting puzzle. This chapter explores the possibility that the explanation lies largely in the nature and operation of American federalism. The vast majority of public employment in the United States occurs at the municipal level, where wages and benefits for public-sector workers make up a large share of expenditures. Especially in relatively poor communities, and especially in the field of education, much of the wage bill is subsidized by grants from state governments to local governments.

For most state governments, recessions bring declining own-source revenue, increasing demands on the social safety net, and large but ostensibly temporary increases in federal grants. Faced with balanced budget requirements, this chapter shows that state governments have chosen to bolster direct expenditures while engaging in large cuts in support for local governments. These cuts, often combined with declining own-source revenues, provide local governments with no choice but to trim the public-sector workforce.

The extent of this phenomenon varies across states. First, declining state aid to localities is more pronounced in the states most adversely affected by recessions. For some states that are less affected by recessions, large federal relief packages are essentially unexpected windfalls, and it has been possible to increase direct state expenditures without making cuts in support for local government. Second, the distribution of federal funds to states during recessions has been strongly biased in favor of small states, which have become increasingly dependent on federal grants with each recession. As a result, the small states have not found it necessary to cut support for local governments during recessions, and they have been able to largely avoid recession-induced cuts to the local public sector. Public-sector employment has always been far greater in small, sparsely populated states than in larger states, and this difference has only grown over time. This chapter begins by placing the most recent recessions in historical perspective, explaining the evolving role of the federal government in funding the activities of the states. It demonstrates that recessions have been important moments in the development of

transfer-dependence among state and local governments. Specifically, recessions are associated with significant increases in reliance on intergovernmental transfers among state governments, but declining aid from states to local governments.

The next section focuses on each recession since 1980, exploring the efforts of state governments to balance their budgets on the backs of local governments while expanding their own expenditures. The following section takes a closer look at the difference between small and large states, and the coevolution of transfer-dependence and a large public sector in the small states. The final section discusses avenues for further research and concludes.

Crises, Ratchets, and American Federalism

Military and fiscal crises are the most crucial junctures in the histories of federal systems. In the United States, the lack of federal response to state-level fiscal crises in the 1840s laid the foundation for a system in which US states were viewed by creditors and voters as miniature sovereigns. For the next seventy years, with the exception of the Reconstruction experience in the South, the US system of federalism was quite decentralized in every respect. Federal involvement in the decisions of state governments was quite limited, although a series of early forays of the federal government into financing and regulating the activities of states is documented by John F. Cogan in chapter 4 of this volume.

In the first half of the twentieth century, however, there were three events that led to ratchet-like spikes in federal taxes and expenditures and a more expansive role for the federal government in regulation. Via the War Revenue Act of 1917, World War I led to a sudden and dramatic increase in the federal government's ability to raise and spend money. Figure 6.1 displays the expenditures of the federal government as a share of total expenditures, beginning in 1900, revealing a large spike associated with World War I. The federal government's role in expenditures quickly retreated after the war, but not all the way to its prewar level.

Next, in response to the Great Depression, the New Deal was perhaps the single most important turning point in the history of US federalism. The federal government became involved in a wide range of activities that had previously been considered off-limits, and for the most part, it has not subsequently retreated. After the New Deal, the states became much more involved in implementing federal grant-funded programs, and both layers of government became intertwined in a complex web of activity.

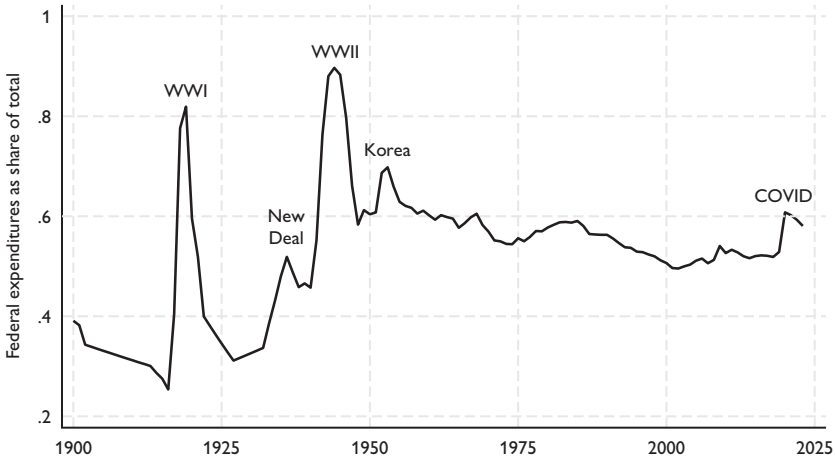


Figure 6.1 Federal expenditures as a share of total (federal, state, municipal) expenditures in the United States, 1900 to present

Source: Author calculations using data from US Census Bureau, Bicentennial Edition: *Historical Statistics of the United States, Colonial Times to 1970*; United States Federal Budget Historical Tables; US Census, Annual Survey of State and Local Finances, all archived by usgovernmentsspending.com.

The next big expansion of the federal government relative to the state and local governments was to fund World War II. The spike in the federal government's share of expenditures was large and lasting, in part because it was followed by the Cold War, the arms race with the Soviet Union, and another spike associated with the Korean War.

With each of these major crises, the federal government gained a more prominent role in taxation, and it came to rely increasingly on intergovernmental grants to states and municipalities, often earmarked for specific purposes and with conditions attached. Each case seems consistent with Milton Friedman's quip that "nothing is so permanent as a temporary government program" (Friedman 1984). Responses to crises, often sold as short-term emergency measures, change the nature of the game of American federalism. They alter incentives, create new winners and losers, and generate new coalitions and vested interests.

One might expect the ratchet effect in federal taxation and expenditures to be associated with something similar in public employment. However, this has clearly not been the case. Using data from the Federal Reserve Bank of St. Louis, figure 6.2 displays public-sector jobs per 1,000 people from 1955 to

the present. Federal government employment (in black) has steadily fallen as a share of the population over the last seventy years, with temporary spikes associated with each decennial census. Employment in the states (in orange) increased in the early postwar period, but has been relatively flat since the early 1980s.

Figure 6.2 makes it clear that the bulk of the growth in public-sector employment in the postwar period has taken place at the municipal level (in green). Growth was steady and steep until the stagflation recession of the mid-1970s. Growth returned after the recession, but next, the early 1980s recessions led to a steep decline in local public employment. This was followed by another lengthy period of employment growth that lasted until the 2001 recession, when the growth of local government employment started a gentle decline, which then intensified with the onset of the great recession, falling dramatically once again with the COVID recession. Local public employment is at the same level today as in 1985. Total government employment at all levels is at about the level of 1966.

Figure 6.2 suggests that while federal and state-level employment are not very responsive to the business cycle, local employment often falls in the wake of recessions, and since 2000, seems to be ratcheting downward with each recession. These recession-induced cuts in local public employment since 2000 are puzzling, given the rise of the practice of negotiating special

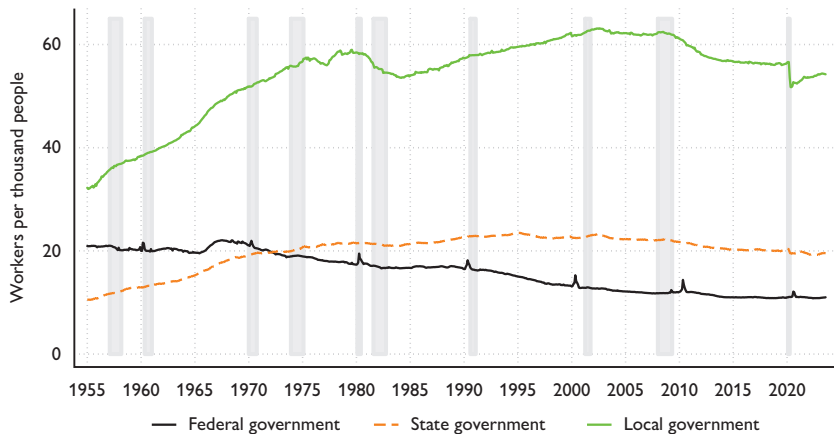


Figure 6.2 Public-sector jobs per 1,000 population by level of government, 1955 to present

Note: Recessions are indicated with vertical gray bars.

Source: Author calculations using data from Federal Reserve Bank of St. Louis.

countercyclical “stimulus” packages with the onset of each recession. The protection of state and local jobs is often front and center in the arguments used to justify rapid passage of these programs during legislative and public debates.

Figure 6.3 plots state and local jobs per thousand people in blue, corresponding to the left axis, and real intergovernmental grants from the federal government to states in orange, corresponding to the right axis. We can see that federal assistance to the states decreased during the early 1980s recessions, but increased modestly for three years after. Each subsequent recession has seen a much larger ratchet in federal grants to states. However, the blue line indicates that if anything, public employment has been leveling off or decreasing with each recession.

Why has this increased federal support associated with recent recessions not insulated the public sector from cuts? The answer may be relatively straightforward: the funds never make it to the local governments and school

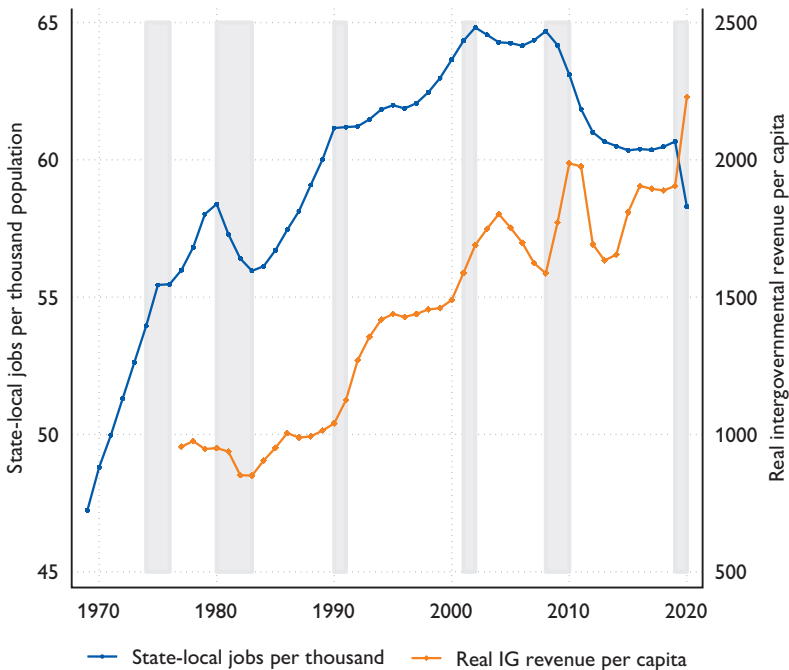


Figure 6.3 State-local public-sector jobs per 1,000 population (left axis) and real federal intergovernmental revenues per capita, 1970 to 2020

Note: Recessions are indicated with vertical gray bars.

Source: Author calculations using data from Bureau of Economic Analysis (BEA) and US Census of Governments via the Willamette Government Finance Database.

districts that are responsible for hiring and firing. Figure 6.4 plots grants from state governments to local governments as a share of state government expenditures. These appear to be ratcheting downward with each recession. Increased federal support for the states associated with recent recessions has clearly not been spent on assistance to local governments.

It is also useful to get a sense of the relative dependence on intergovernmental transfers of both state and local governments. Figure 6.5 plots intergovernmental transfers as a share of revenues for state governments (in blue) and local governments (in green and orange). Starting with the early 1990s recession, transfer-dependence has been ratcheting starkly upward for the states. Each recession ushers in a period of sharply increasing transfer-dependence, which then levels off but never returns to the pre-recession level, ratcheting up again with the next recession.

In general, local governments are more reliant on grants than state governments. During the era of general revenue sharing, they were highly dependent on transfers, but this reliance fell throughout the 1980s after the demise of general revenue sharing. It started to rise slightly again in the 1990s, but beginning with the 2001 recession, transfers as a share of revenues has fallen with recent recessions as state aid has been cut. Transfers from higher-level

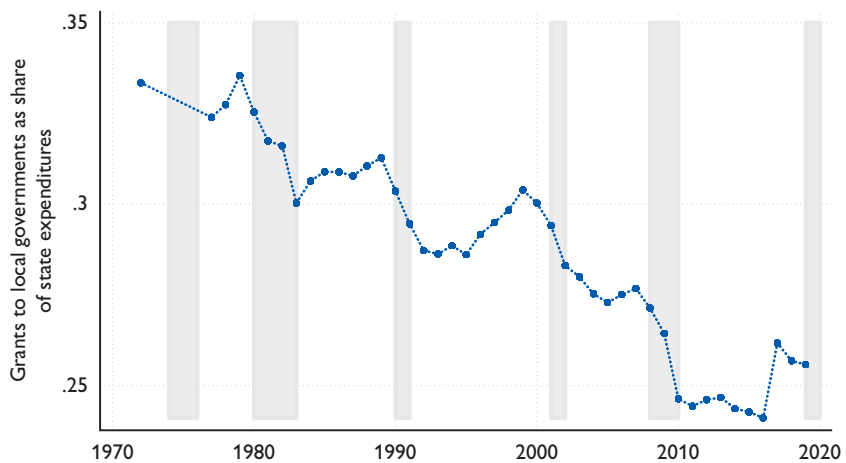


Figure 6.4 Grants from state government to local government as share of total state government expenditures, 1970 to 2020

Note: Gray bars indicate recessions. Data not available for 1973–1976.

Source: Author calculations using data from US Census of Governments via the Willamette Public Finance Database.

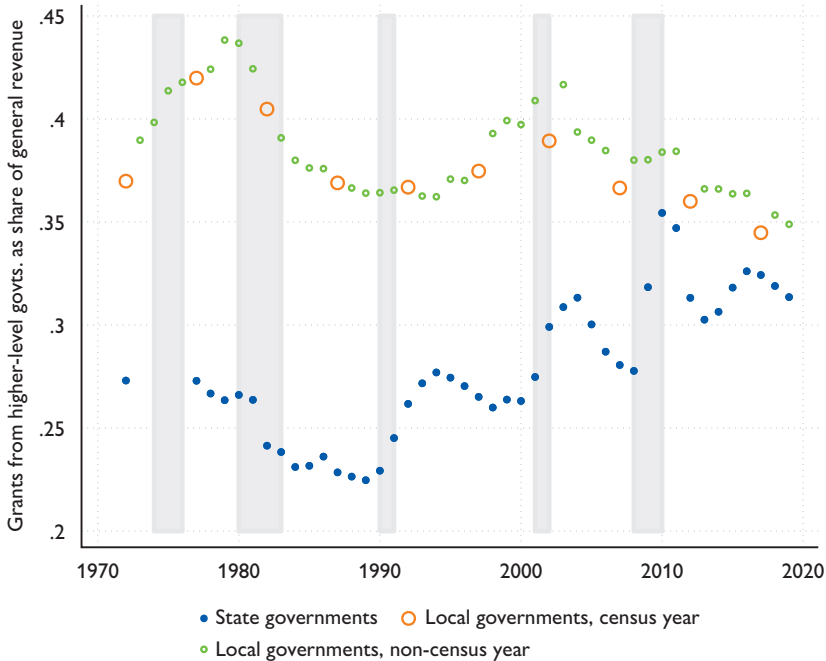


Figure 6.5 Grants from state government to local government as share of total state government expenditures, 1970 to 2020

Note: Gray bars indicate recessions. Data for states unavailable for 1973–1976. Full census of governments taken in years ending in 2 and 7; sample in other years.

Source: Author calculations using data from US Census of Governments via the Willamette Public Finance Database.

governments as a share of local revenue are now lower than at any time since data became available in the early 1970s, and local governments are now almost as reliant on own-source revenues as are the states.

In sum, it appears that something basic has changed in American federalism in recent decades. State governments are learning to expect counter-cyclical fiscal relief from the federal government during recessions. Local governments, on the other hand, have learned to expect strongly pro-cyclical transfers from their state governments.

A Closer Look at Recessions since 1980

Let us take a closer look at the dynamics associated with the early 1980s double recession, the early 1990s recession, the early 2000s recession, and the great recession. It is important to note that recessions do not affect all states

equally. In fact, in each recession a nontrivial number of states continued to experience economic growth throughout the recession.¹ Let us examine those states separately from the states that experienced contraction.

I choose the baseline years of 1980, 1990, 2001, and 2008, and examine real per capita federal grants to states relative to the base year in subsequent years. The evolution of aggregate real federal grants per capita is plotted in figure 6.6, in black for the states with declining GDP per capita during the recession, and in gray for the states with increasing GDP per capita. The early 1980s recession was the last in which states experienced declining real federal grants per capita, although transfers to the most affected states recovered to pre-recession levels by 1985. But in each subsequent recession, real per capita grants increased sharply for several years.

Figure 6.6 also provides an indication of the extent to which fiscal relief in the wake of recessions is poorly targeted. In the 1990s and 2000s, states with increasing GDP per capita during the recession actually received somewhat larger spikes in federal transfers than those whose economies contracted. To examine this further, for each recession, I regressed the percent change in federal grants from the pre-recession fiscal year to the year of the (nation-wide) trough against the percent change in state GDP per capita for the same period. For three of the four recessions, there was no discernible relationship, but for the early 2000s recession, the coefficient was positive and significant, indicating that the states with the strongest growth received the largest increase in federal grants, and those most affected by the recession received the smallest increases.

Next, figure 6.7 examines what happens to real direct state expenditures during recessions; that is to say, expenditures other than those on intergovernmental grants to lower-level governments. In each of the three most recent recessions, state governments increased their direct expenditures, even in states where GDP per capita (and hence own-source revenues) declined. In each case, the evolution of direct expenditures closely resembles that of federal grants in figure 6.6.

Figure 6.8 plots intergovernmental grants to lower-level governments. Here, the pattern is quite different. In the 1980s, the states most affected by the recession cut their transfers to local governments for four years. In the early 2000s and again after the great recession, both types of states engaged in a sustained long-term period of cuts in transfers to local governments. In the years after the great recession, these cuts were much deeper for the states most affected by the recession.

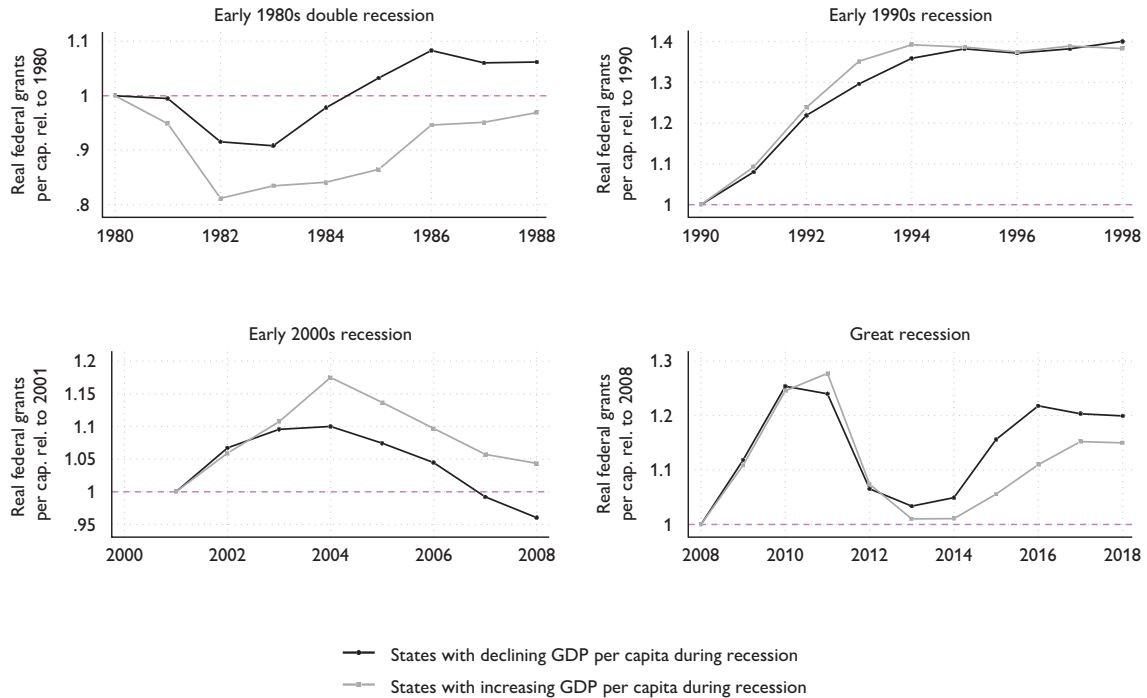


Figure 6.6 Real federal grants per capita relative to base year, growing versus declining states

Source: Author calculations using data from US Census of Governments via the Willamette Government Finance Database.

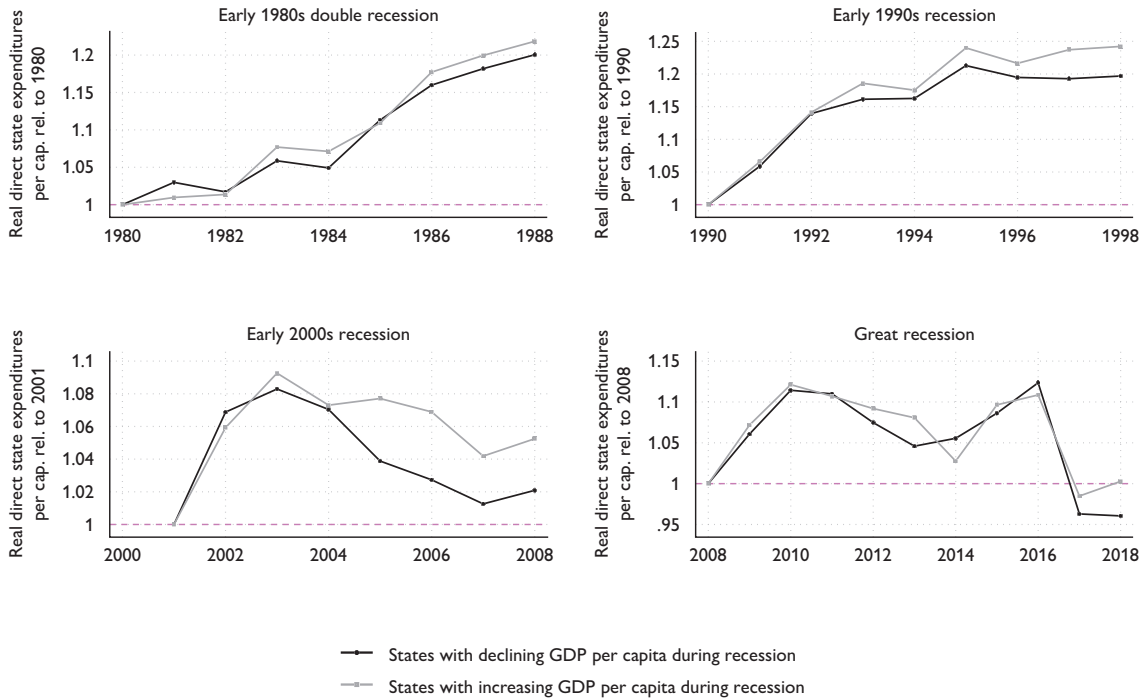


Figure 6.7 Real per capita direct state expenditures relative to base year, growing versus declining states

Source: Author calculations using data from US Census of Governments via the Willamette Government Finance Database.

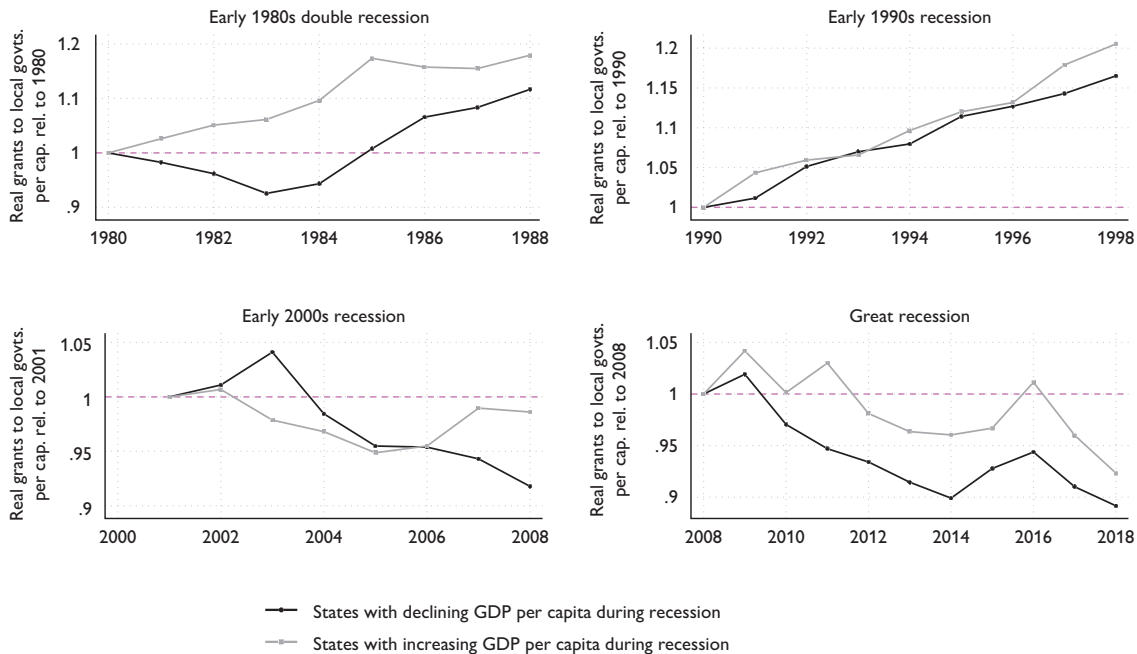


Figure 6.8 Real per capita transfers to local governments relative to base year, growing versus declining states

Source: Author calculations using data from US Census of Governments via the Willamette Government Finance Database.

It appears that states used increased federal transfers to bolster their own direct expenditures. This is not surprising, since those direct expenditures included programs like Medicaid, for which demand was increasing during the recession, and for which some of the increased federal funds were expressly designated (see chapter 10 of this volume by Joshua Rauh and Jillian Ludwig). The federal matching rate for Medicaid creates strong incentives to increase Medicaid spending and make cuts elsewhere.

At the same time, their hands were tied by their obligations to implement cofinanced federal programs, for which demand increases during recessions. Perhaps it is the case that demand for education and other services funded by grants from state governments to municipalities is less correlated with the business cycle, causing these grants to become squeezed during recessions. It may also be the case that governors and state legislators believe they are less likely to be blamed for cuts that will ultimately be carried out by municipal officials. Whatever the reason, with the exception of the 1990s recession, the states carried out large and sustained cuts in transfers to local governments.

Local governments were faced with declining own-source revenues as well as cuts in grants. Figure 6.9 demonstrates the implications for employment. For some years in some states, the BEA employment data do not differentiate between state and local employment, so in order to conduct time-series analysis over the entire period, it is necessary to combine them. State and local employment declined substantially after the early 1980s recessions, mildly after the early 2000s recession (and only for the states experiencing economic decline), and very substantially after the great recession.

Declining aid from state governments seems to be an important part of the story. A useful avenue for further research is to use data on individual local governments and school districts to disentangle the relative importance of declining own-source revenue versus intergovernmental grants in public-sector employment decisions, perhaps contrasting high-income suburban areas with lower-income urban core areas and rural areas, the latter of which tend to be highly dependent on intergovernmental transfers.

Are Small States Different?

An enduring feature of US federalism is that the system of intergovernmental transfers is biased in favor of small states (Lee 2000; Dragu and Rodden 2011). Figure 6.10 plots real federal grants per capita against the log of state population, for 1972 (the first year for which data are available) in red, and for the most recent year, 2020, in black.

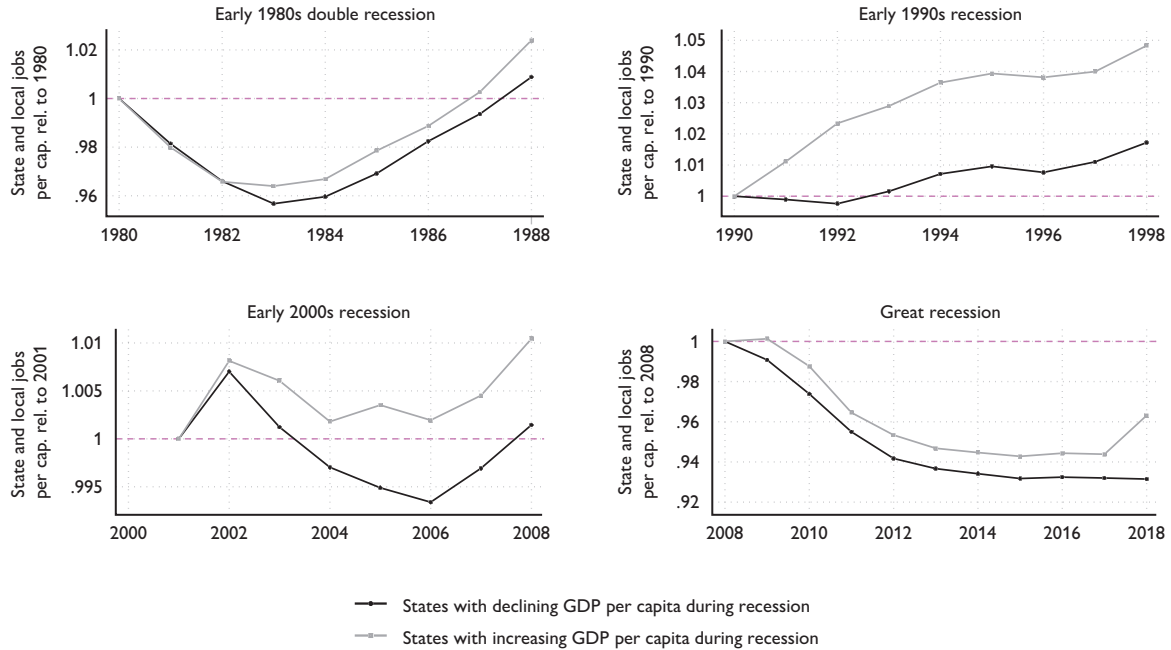


Figure 6.9 State and local employment relative to base year, growing versus declining states

Source: Author calculations using data from BEA.

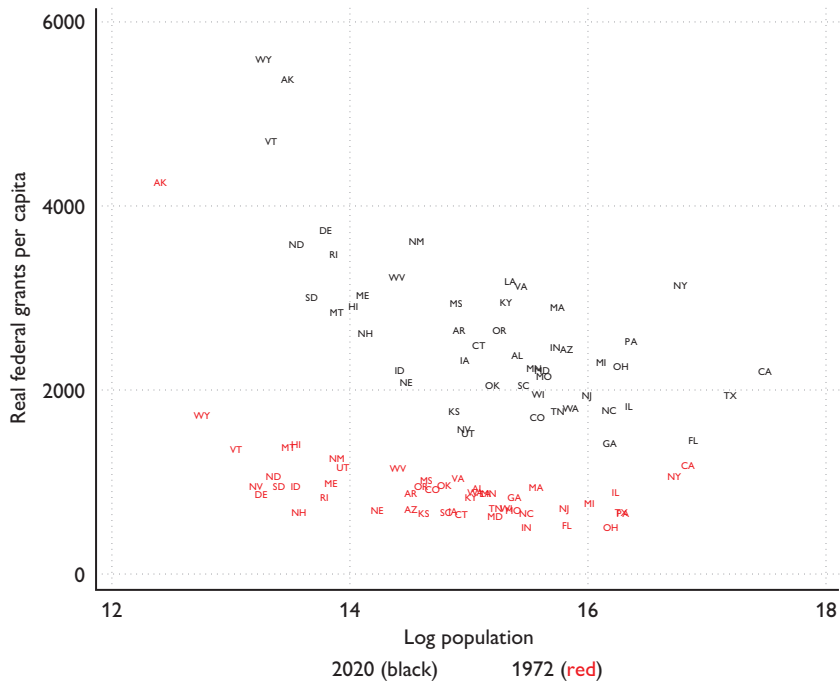


Figure 6.10 Real federal grants per capita and log population, 1972 and 2020

Source: Author calculations using data from US Census of Governments via the Willamette Government Finance Database.

Figure 6.10 shows that there was already a small-state bonus in 1972, but it has grown substantially over the decades. The growth in real federal grants per capita has been much more modest in large states like California or Florida than in small states like West Virginia or Wyoming. On a per capita basis, federal transfers are more than twice as high in Wyoming and Vermont as in Texas and Illinois.

Representatives of smaller states advocate for larger federal transfers on the logic that the per capita cost of providing services is higher in small and especially sparsely populated states. Economies of scale in service provision are very likely an important consideration, and population decline in rural areas may have increased the costs of service provision even further. However, it seems doubtful that the cost differential has grown so substantially over the last fifty years as to explain the pattern in figure 6.10. Some of the small states experiencing dramatic growth in federal grants per capita, like Delaware and Rhode Island, are densely populated. A common claim in the

political economy literature is that small states, with two senate seats, are in a better position to bargain for higher transfers in the legislature (Lee 2000).

Whatever its origin, it seems that a norm, or perhaps focal point, in time-pressured negotiations over fiscal relief packages during recessions has emerged, whereby the starting point for discussions about distribution is a per capita scheme with a very generous subsidy for small states. Senators from small states have been vocal in threatening to scuttle proposed packages unless they receive their customary windfall. Legislative bargaining over fiscal relief packages seems to have provided small states with an excellent opportunity to expand their baseline advantage.

Figure 6.11 plots the coefficients from yearly regressions of real per capita federal grants on logged population density. It shows that the small-state advantage (represented by negative coefficients) gradually increased

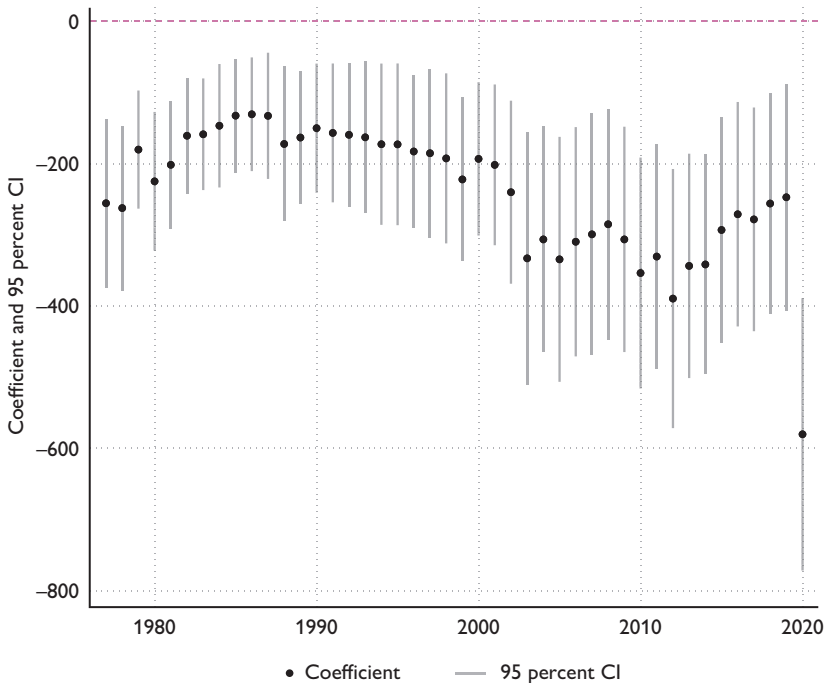


Figure 6.11 Coefficients and 95 percent confidence intervals from regressions of real federal grants per capita on logged state population

Source: Author calculations using data from US Census of Governments via the Willamette Government Finance Database.

during the 1990s, but then ratcheted upward with the rescue package after the 2001 recession, and then again with the rescue package after the great recession. However, the largest increase in small-state advantage came with the first COVID relief package in 2020, which was exceptionally generous to small states.

This system of largesse for small states should make it much easier for them in the aftermath of recessions. Small states should be relatively immune from the constraints that generate large cuts in grants to local governments in larger states and, as a result, less likely to experience large cuts in public employment.

I classify the following states with three or fewer members of the House of Representatives as “small states”: Wyoming, Alaska, Vermont, North and South Dakota, Delaware, Montana, Rhode Island, Hawaii, Maine, New Hampshire, West Virginia, New Mexico, Idaho, and Nebraska. As above, I examine the evolution of real per capita transfers from states to local governments, aggregating over all small states and all remaining states, for the most recent recessions.

Figure 6.12 shows that indeed the small states have not cut intergovernmental grants to local governments after the 1980s recession, the early 1990s recession, or the 2001 recession. In the great recession, there were cuts in grants to local governments among the small states, but they were far smaller than those in the larger states.

What are the implications for public employment? Figure 6.13 presents a similar display of the data for state and local jobs per thousand people. It demonstrates that public-sector employment reacts very differently to recessions in small states than in large states. Cuts in public employment were much smaller in small states than in larger states in the 1980s recession. Public-sector job growth was stronger in the small states after the 1990s recession than in the larger states. In the early 2000s, when small states received an especially large boost from the federal government, they went on a public-sector hiring spree, while larger states made cuts. Finally, during the great recession, small states did cut jobs, but those cuts were less than half the size of the cuts in the larger states.

I have also taken an event study approach, regressing real per capita transfers to local governments and state-local public employment on lags and leads of the year of recession onset. This approach shows that larger states react to recessions with lasting cuts, while small states do not.

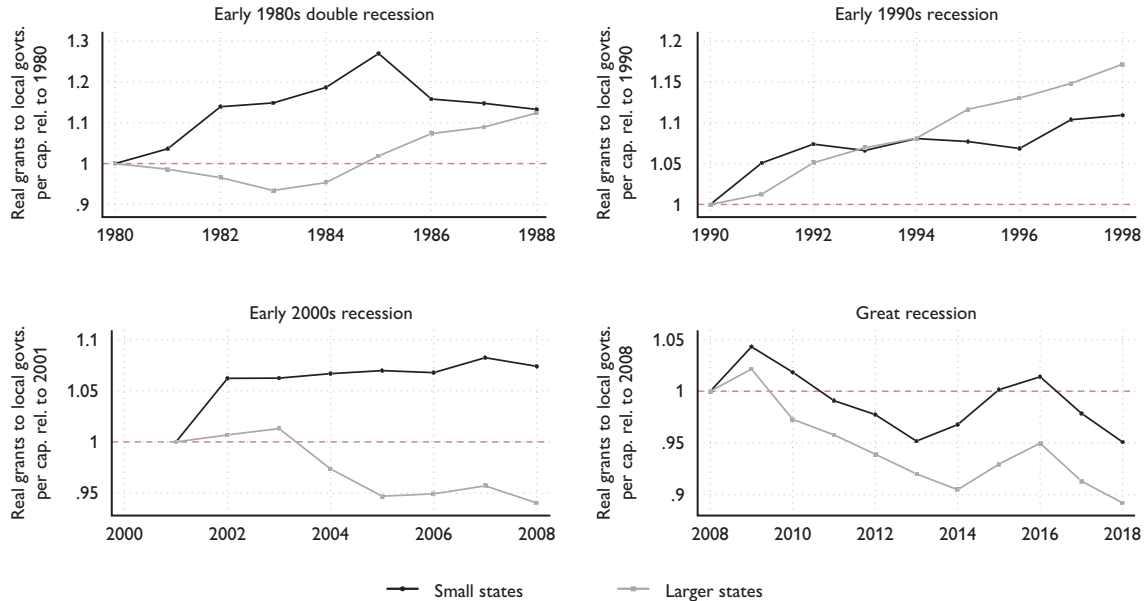


Figure 6.12 Real per capita grants from state governments to local governments relative to base year, small states and larger states

Source: Author calculations using data from US Census of Governments via the Willamette Government Finance Database.

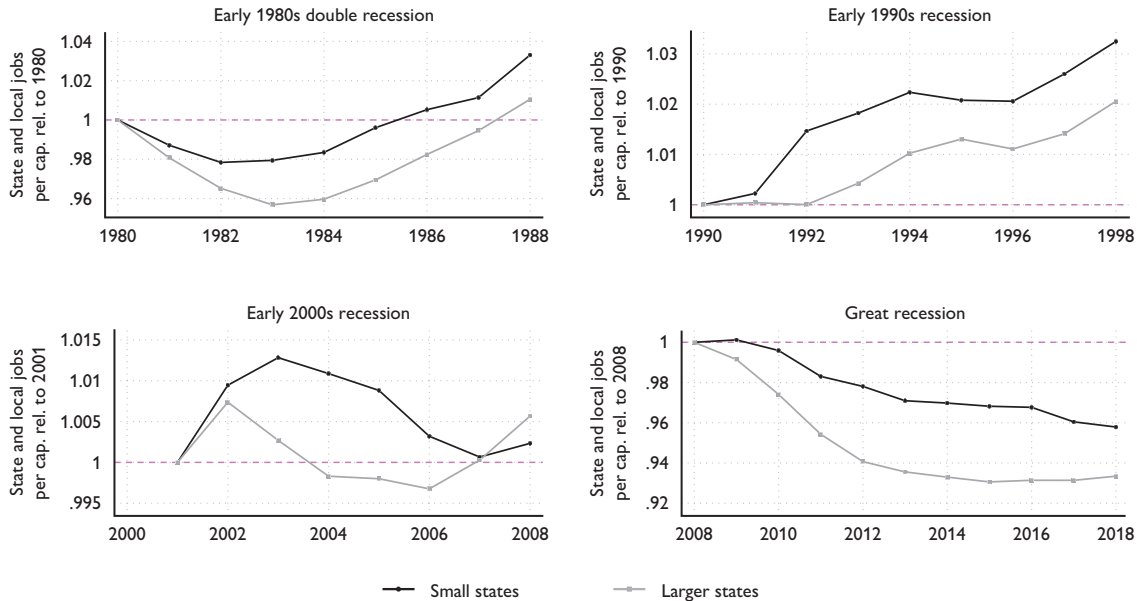


Figure 6.13 Real per capita grants from state governments to local governments relative to base year, small states and larger states

Source: Author calculations using data from BEA.

In short, the role of downturns in trimming the growth of the public sector appears not to apply to small states, for whom recessions can lead to windfalls in federal funds. There has been a strong negative correlation between population size and public employees per 1,000 population since data first became available in 1969. Figure 6.14 displays coefficients from year-by-year regressions of state and local employees per 1,000 people on logged state population, showing that the negative relationship between state size and the level of public-sector employment has grown stronger over time.

This relationship goes against popular perceptions that public employment is especially dominant in large, urbanized states in the Northeast with a history of strong labor unions. Figure 6.15 plots state and local jobs per 1,000 population against logged state population in 2020. Public employment is relatively low in large, urbanized states like Florida, Pennsylvania, and Michigan, and even California. Relative to the population, the public

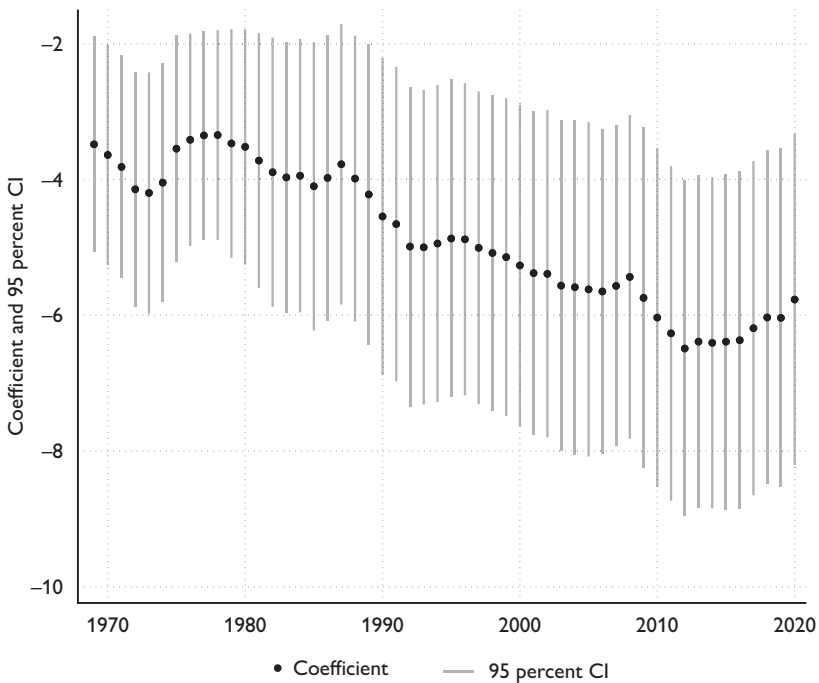


Figure 6.14 Coefficients and 95 percent confidence intervals from regressions of state and local public employees per 1,000 population on logged state population
 Source: Author calculations using data from BEA.

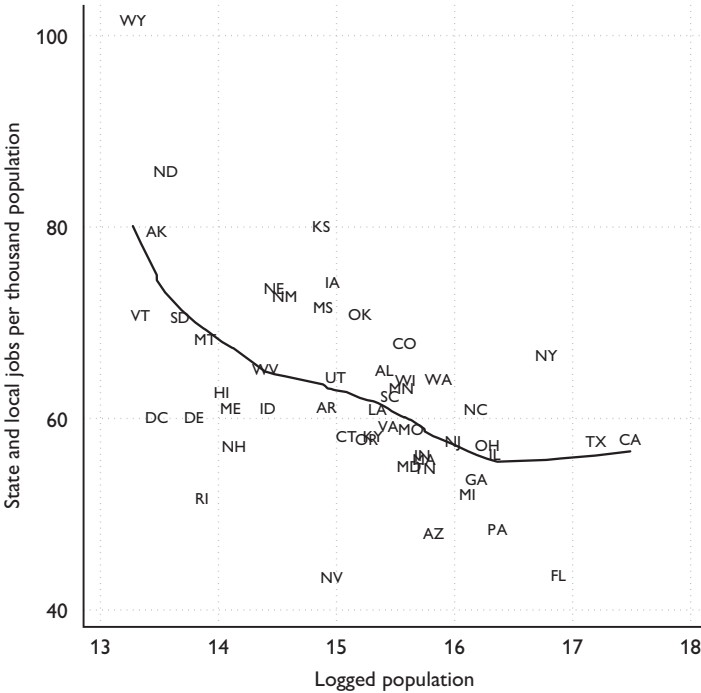


Figure 6.15 State-local employment per 1,000 population and log population, 2020
 Source: Author calculations using data from BEA.

sector is almost twice as large in North Dakota as in Florida. State and local public-sector employment per thousand population in Wyoming and North Dakota are larger than for all levels of government in France. In Alaska and Kansas, they are larger than for all levels of government in the UK or Austria. In Florida, Pennsylvania, and Arizona, in contrast, the public sector is substantially smaller relative to population than in any country in Europe.

Surely an important part of the explanation for this relationship is that a larger number of employees per capita is required to provide similar service levels in the small states that are also sparsely populated. Note, for example, that Delaware, Maine, New Hampshire, and Rhode Island are outliers in figure 6.15. The relationship is driven by rural states. However, an interesting question for future analysis is the role of ever-increasing federal grants in loosening the fiscal constraints on small, rural state governments, which have developed exceptionally large public sectors.

Discussion and Conclusion

Recessions and fiscal crises are crucial moments in the evolution of federal systems. In the 1840s, the US federal government famously resisted calls for federal bailouts. However, in the post–New Deal era, as the state governments have become increasingly responsible for implementing aspects of the modern social safety net such as unemployment insurance and Medicaid, legislators and members of the executive branch find it increasingly difficult to ignore the fiscal woes of the states during recessions. Own-source revenues decline and demands on safety net programs increase, and states are unable to borrow.

With each recent recession, federal legislators feel compelled to negotiate a “temporary” package of assistance, usually with a very strong bias in favor of small states. In most states, these additional transfers appear to be used to bolster direct expenditures by state governments. But in order to balance budgets, states have developed a practice of implementing rather large cuts in transfers to local governments, who then have no choice but to reduce the size of the local public sector. In related work, I have shown that the impact of this phenomenon is especially large in rural areas, which are typically more dependent on grants from the state government and rely much more heavily on public employment than suburban or urban areas (Rodden 2023).

In this chapter, I explored a potentially important source of cross-state heterogeneity. For small states—especially those with natural resources or other economic activities that make them less vulnerable to national downturns—a recession can bring about a windfall of federal funds. Perhaps as a result, small states have been less likely to cut their support to local governments after recessions, and less likely to cut public-sector jobs. These states have also developed the highest levels of public-sector employment in the United States.

Future work might pay closer attention to the reactions of individual state governments to the massive expansions in federal assistance associated with recessions. In addition to state size and the severity of recessions, the partisanship of state government might be another interesting source of cross-state heterogeneity. Carlino et al. (2023) show that the marginal propensity to spend additional transfers is higher in states controlled by Democrats than in states controlled by Republicans. If Democratic states respond to additional federal grants with higher expenditures, and Republican states respond with tax cuts, the latter would end up with larger transfers as a share of revenues.

An ongoing political realignment has created a growing aggregate positive state-level (and county-level) correlation between income per capita and Democratic voting, as well as a growing correlation between population density and Democratic voting. Since federal grants favor relatively poor, smaller, and more sparsely populated states, a strong correlation between transfer-dependence, the size of the public sector, and partisanship has appeared in the last two decades. In addition to rurality, perhaps part of the explanation for relatively high levels of public employment in Republican states and counties has to do with legacy costs associated with past generosity in determining benefits. Perhaps it is the case that localities with a long history of government by Democrats tend to spend more on benefits for long-standing employees and retirees, while localities run by Republicans might be able to spend more on new hires. The partisanship of governors and legislators might also have an impact on the strategies chosen by state governments when determining how to cut expenditures during recessions, although preliminary analysis indicates that the reliance on cutting grants to local governments is broadly bipartisan.

Another source of cross-state variation is taxation and the nature of revenue generation in the fifty states. Some states, like California, rely on progressive income taxes, and have experienced large revenue windfalls as high-income state residents have experienced rapid income growth. On the other hand, states without income taxes have not experienced similar growth in own-source revenues during recessions, but have also experienced less volatility over the business cycle.

Another important source of cross-state and time-series variation is in the nature of education finance. In some states, such as California and Michigan, the state government has become far more involved in education finance than in other states. And in several states, far-reaching reforms and orders by state courts have changed the nature of education finance and the role of the state government vis-à-vis school districts over time, providing researchers with valuable quasi-experiments.

Another worthwhile area for future analysis is to zoom in on the specific expenditures and types of employment that municipalities are cutting after recessions. Future work might explore the implications of these cuts, if any, for pupil-to-teacher ratios and educational outcomes. Hanushek (2006) points out that pupil-to-teacher ratios have experienced a long period of decline since the 1980s, although the great recession represented a sudden and sharp deviation from this trend (Evans, Schwab, and Wagner 2019). In some parts of the country, as the population ages and birth rates decline, it may be possible

for school districts to employ fewer teachers per capita without increasing the pupil-to-teacher ratio. Moreover, it is possible that some of the recession-induced cuts are made to nonteaching employees. Furthermore, public employment per capita might be declining in part because school districts and municipal governments are relying increasingly on contractors rather than formal employees.

It might also be worthwhile to explore the role of public-sector unions in the wake of declining support from the state after recessions. Perhaps union leaders face incentives to protect the pay and benefits of long-standing members rather than advocate for the maintenance or expansion of the size of the public-sector workforce. In fact, Scott Walker explicitly defended his efforts to curb the power of public-sector unions in Wisconsin as a way to protect public-sector jobs during a period of austerity.² It is possible that the specific reaction to budget cuts is different in states with and without strong public-sector unions.

A final area worthy of further study relates to policy reform. Few would advocate in the abstract for a system in which countercyclical fiscal relief for lower-level governments is determined by ad hoc political bargains carried out in a high-pressure environment during fiscal crises. In addition to poor targeting and potential moral hazard, this chapter stresses another, less-appreciated aspect of this system: sharply declining support for the local governments that are responsible for paying the salaries of teachers, healthcare workers, and firefighters.

Notes

1. I differentiate between states that experienced a decline in real GDP per capita from the year of onset to the trough and those that experienced (at least some) growth during that period. In the 1980s, states experiencing growth included New Hampshire, Oklahoma, Colorado, Massachusetts, Texas, Wyoming, New Mexico, North Dakota, Louisiana, Virginia, Connecticut, and Alaska. In the 1990s, they included Delaware, Nebraska, Alabama, Kansas, Utah, Wyoming, West Virginia, New Mexico, Washington, Arkansas, North Dakota, Louisiana, South Dakota, and Hawaii. In the early 2000s, the list was quite long: New Hampshire, Florida, Oklahoma, Delaware, Maryland, Massachusetts, Texas, Nebraska, Arizona, New Jersey, Montana, Maine, Wyoming, Rhode Island, New York, West Virginia, North Dakota, Pennsylvania, Louisiana, Virginia, Connecticut, Alaska, Vermont, and Wisconsin. In the great recession, the list was quite short: Oklahoma, Maryland, New York, West Virginia, North Dakota, South Dakota, Alaska, Vermont.

2. See Scott Walker, “Conservative Reforms Worked Wonders in Blue Wisconsin,” *New York Times*, August 26, 2021.

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