PART FOUR

INTERGOVERNMENTAL ASPECTS OF BUDGET POLICY

This book is designed to enable readers to perceive and understand connections that they might have overlooked: connections among different disciplines; connections among budgetary institutions in the legislative and executive branches of federal and state governments; connections between U.S. budgetary policy and fiscal policy in other countries; connections between the perceptions of voters and policymakers and actual budget policy. In this section, we examine more closely intergovernmental connections that influence fiscal outcomes.

John Joseph Wallis and Barry Weingast's examination of state constitutional debt limitations and their effect on the choice of financing methods for infrastructure differs from previous chapters in two crucial ways. First, they provide the first sustained analysis of local governments and their role in fiscal policy as they issue bonds to build roads, schools, sports stadiums, and other public goods. Any complete assessment of local government must take account of state constitutional and statutory provisions because local governments are created by the state and their powers are dramatically affected by state decisions. Second, Wallis and Weingast provide a different sort of comparative analysis than we have seen before: their analysis is historical, comparing infrastructure financing in the United States at three different periods over a 150-year time span. Although other chapters may have provided some historical context for contemporary budget institutions, this chapter is the most sustained empirical comparison of budget institutions and their consequences across a substantial period of time.

The authors' historical analysis explains aspects of the current constitutional structure that governs state and local government debt, a structure that developed over time as public officials reacted to financial crises brought about by previous policies. The result is a complex and fragmented local government system, consisting of many institutions focused on particular purposes, such as school, water, and sewer districts, alongside more traditional institutions, such as cities and counties. These special governments often have different

boundaries than county and city governments and have independent power to issue debt. Wallis and Weingast conclude that the flexibility that now characterizes the structure of local government has been largely beneficial, allowing the creation of units that match an infrastructure project's beneficiaries to those who must finance it. Because of this matching of benefit and cost, it is likely that infrastructure decisions in the United States will be welfare enhancing.

In contrast, Chapter 12 does not provide such a rosy view of the results of intergovernmental interactions. David Super focuses on the connection between federal fiscal policy and state fiscal policy. Issues related to fiscal federalism have received increasing attention in the courts and Congress. A series of Supreme Court cases have dealt with the constitutional issues relevant to conditional spending and federal mandates applied to state officials.[1] Outcry from state policy makers about "unfunded mandates" levied by the federal government led to passage of the Unfunded Mandates Reform Act of 1995.[2] Super's analysis of this crucial intergovernmental relationship goes beyond the rhetoric of unfunded mandates and provides a comprehensive set of issues that affect state and national fiscal policy. One problem that this chapter clearly illuminates is that state fiscal policy is much more vulnerable than federal budget decision making to business cycles, a reality that federal lawmakers often ignore when reacting to economic downturns, thereby exacerbating the states' precarious fiscal condition.

This chapter is not only descriptive, but it also provides procedural and substantive recommendations for federal and state budget policy in light of the intergovernmental interactions Super carefully sets forth. For example, he argues that the differences between state and federal governments lead to the conclusion that much of the aid to low-income Americans is better provided by the federal government, rather than the state and local governments who increasingly bear the financial burden of such programs. In contrast, aid to the elderly and persons with disabilities is better assumed by states because it is not as dependent on economic volatility. The complexities of budgeting in a federal system are numerous – not only are there vertical interactions between state and federal levels, but there are also horizontal interactions because one state's budget decisions may affect the economic environment of other states.

In the end, these chapters underscore the need for sensitivity to complexity and nuance as budget policy decisions are made. Policymakers need to understand how budget rules have developed over time to respond to crises in the past; and they need to be aware that a decision at one level of government may influence the options of policymakers at other levels who face different political and economic constraints.

[1] *See, e.g., South Dakota v. Dole*, 483 U.S. 203 (1987) (providing clear statement requirement for federal conditions applied to state assistance); *Printz v. United States*, 521 U.S. 898 (1997) (finding provisions of the Brady Act to be unconstitutional commandeering of state officials).
[2] Pub. L. No. 104–4, 109 Stat. 48 (codified in scattered sections of 2 U.S.C.).

11 Dysfunctional or Optimal Institutions?

State Debt Limitations, the Structure of State and Local Governments, and the Finance of American Infrastructure

John Joseph Wallis and Barry R. Weingast

I. INTRODUCTION

American state and local governmental fiscal institutions present a contrast. Many scholars regard these institutions as dysfunctional: balanced-budget provisions do not produce balanced budgets; debt restrictions do not restrict debt issue; tax and expenditure limitations limit neither taxes nor expenditures; and budget stabilization funds fail to provide budget stabilization. Richard Briffault, for example, concludes "state constitutional debt restrictions have been circumvented by new and creative financing devices that tend to drive up the cost of borrowing, encourage the fragmentation of state governments, and facilitate the evasion of balanced budget requirements."[1]

In contrast, American state and local governments are quite responsible by any reasonable measure of fiscal probity. They borrow large amounts of funds and rarely fail to service or repay their debts. The vast majority of state and local debt is issued to finance infrastructure investments, and American infrastructure is in many respects the best in the world. The decentralized structure of American government, while far from perfect, often is held up as a system of how to constrain the powers of government through the institutional mechanism of federalism.

[1] Richard Briffault, Balancing Acts: The Reality Behind State Balanced Budget Requirements 51 (1996). Chapter 5 of Briffault has a comprehensive survey of the literature on the effectiveness of fiscal rules. *Ibid.* at 55–62. "In other words, legal balanced budget requirements per se do not compel balance." *Ibid.* at 59. There is also an extensive economics literature on the effectiveness of fiscal rules, particularly debt limitations and balanced-budget restrictions. For a review of this literature, see James Poterba, *Balanced Budget Rules and Fiscal Policy: Evidence from the States*, 48 Nat'l Tax J. 329 (1995).

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We resolve the apparent contradiction of these two views by looking deeper into the effect of fiscal rules on the structure of American governments. The structure of American state and local governments has changed frequently, if episodically, since 1776. We argue that scholars have failed to appreciate the degree to which fiscal issues have shaped the structure of American state and local government.

Our main hypothesis is that the current structure of state and local governments and their proven ability to provide infrastructure result from two centuries of evolution of constitutional rules, primarily fiscal rules about government borrowing. The structure works well at constraining state and local governments to make investments in public infrastructure and services that generate positive social returns. Canals, roads, improvements to rivers and harbors, railroads, and banks all helped transform a large portion of Americans from self-sufficient farmers into market specialists for national and international markets. Roads, water, sewer, gas, electric, solid-waste disposal, schools, and fire services all fostered the growth of cities necessary for American industrialization.

Paradoxically, the effect of fiscal restrictions over time has been to produce more borrowing and larger governments. Fiscal restrictions allow borrowing and constrain governments to issue debt for socially useful positive purposes and, ultimately, repay it. The system works, and citizens are willing to pay higher taxes and service a larger government debt because they receive infrastructure projects of greater value.

Our approach is both historical and conceptual. We address three historical questions. First, how do we explain the dramatic changes in the structure of state and local governments over the course of the 19th and early 20th centuries? Second, how do we explain the dramatic change in the structure of state and local debt? In 1841, state debt was nine times local debt; in 1902, local debt was eight times state debt. Third, how do we interpret the evolving constitutional rules regulating state and local debt? Our focus is on the years from 1840 to 1933, the time when state and local governments adopted many of the rules that govern their internal fiscal structure.

Public finance often takes the nature of government policies as given. "Second-generation fiscal federalism" (SGFF) alters this perspective by assuming that different policies have incentive effects on the behavior of the politicians and, further, that policy rules will change over time in response to these incentives.[2] As a result, some budget rules are more likely to create problems with

[2] Oates and Weingast explore the distinction between first- and second-generation models and provide surveys of second-generation models. *See* Wallace Oates, *Toward a Second-Generation Theory of Fiscal Federalism*, 12 Int'l Tax & Pub. Fin. 349 (2005); Barry R. Weingast, *Second Generation Fiscal Federalism: Implications for Decentralized Democratic Governance and*

debt finance than others. An important normative question of SGFF is how to design fiscal institutions so that the incentives of political officials align with the citizens they represent. We focus primarily on the structure of governments – the distribution of government functions and revenue source between levels of government – and the rules about how governments authorize new borrowing.

Early Americans learned about fiscal organization through trial and error. As a result, the evolutionary history of state and local governments exhibits a recurring cycle of behavior. Governments pursued policies under their existing rules, which then caused problems, including fiscal crises. The crises were followed by adjustments in the rules. The new rules produced a new set of policies, often followed by another set of crises and another round of rule changes.

Three major cycles occurred from the birth of the republic through the mid-20th century. In the first cycle, from 1790 to 1850, states invested heavily in financial and transportation infrastructure. States reacted to the financial crisis, culminating in the state defaults of the 1840s, with a series of constitutional amendments that created procedural restrictions on state debts that made it more costly for states to finance infrastructure through debt issue. In the second cycle, from 1840 to 1870s, infrastructure investment shifted decisively to local governments. The shift to local borrowing produced local default crises in the 1870s. States again responded constitutionally, extending procedural restrictions and specific limitations on the issue of local government debt in the 1870s. In the third cycle, from the 1880s to the 1930s, the effect of restrictions on local general governments created incentives for the development of "special governments": school districts, sewer and water districts, and utility districts whose boundaries may extend across local governments or exist completely within existing local governments. After the turn of the 20th century, states began limiting the liability that state and general-purpose governments assume for special-district debts.

Changes in government structure fall into two categories. The first involves the location of government functions. The *substitution hypothesis* maintains that greater restrictions on *state* borrowing fostered the growth of *local* governments as government functions and borrowing moved to smaller government units. The second involves the type of governments that existed. The *government jurisdiction hypothesis* holds that Americans reacted to the recurring cycles of debt problems by designing a flexible set of new local

Economic Development (Hoover Institution Stanford University Working Paper, 2006). Wallis, Sylla, and Legler provide a SGFF model that explains the evolution of the early American banking system into a competitive industry. *See* John Joseph Wallis, Richard Sylla, and John Legler, *The Interaction of Taxation and Regulation in Nineteenth Century Banking*, *in* The Regulated Economy: A Historical Approach to Political Economy 121 (Claudia Goldin and Gary D. Libecap eds., 1994).

governments, special governments, that more closely matched beneficiaries and taxpayers.

In general, changes in the structure and jurisdiction of American governments over time have produced more and smaller governments. These smaller governments better match the citizens who benefit from the project being built, with the taxpayers responsible for servicing bonded debts. More closely matching taxpayers and beneficiaries has the effect of ensuring better decisions about which projects are built. The development of smaller jurisdictions required the articulation of liability rules. In many cases, special district governments are solely liable for their bonded debts. Lenders who cannot depend on the deep pockets of general governments to bail out special districts will pay much closer attention to fiscal viability of proposed projects, thereby mobilizing the private market to police public borrowing.

This institutional structure is not perfect, but nonetheless, on balance, it is quite positive. America has some of the finest infrastructure in the world. State and local governments issue huge amounts of debt each year, and yet very few fail to make good on their bonds.

This chapter proceeds as follows. Section II presents a brief overview of the history of governmental structure and infrastructure provision. Section III discusses our political approach to governmental policymaking with respect to infrastructure projects. Section IV provides evidence of state governmental behavior in the first cycle, including the emerging state debt crisis after 1841. Section V discusses the first round of constitutional revisions in reaction to the debt crisis. Section VI examines the effects of procedural debt restrictions on state borrowing between 1841 and 1860. Section VII turns to the shift in infrastructure provision from state to local governments in the second cycle. Section VIII raises some of the complications involved in home rule. Section IX treats the growing importance of special governments in the second and third cycles. Section X returns to local governments, including limited liability for special government debt. Our conclusions follow.

II. GOVERNMENT STRUCTURE AND INFRASTRUCTURE: A BRIEF HISTORY

Table 11.1 gives the number of governments by type from 1942 to 2002, for the Census of Government years. Two features of this data are striking: the large number of governments – especially given that there are only 50 states and 3,000 counties – and the significant decline in the number of governments over the 20th century. Nearly all of the action is in two types of governments. The number of school districts declined from 108,579 in 1942 to 15,014 in 2002, while the number of special districts rose from 8,299 to 35,052. The number of counties, municipalities, townships, and villages has been relatively constant.[3]

[3] There were 18,189 counties, municipalities, towns, and townships in 1942, and 18,976 in 2002.

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Table 11.1. Number of governments, by level and type, 1942 to 2002

				Local					
Year	Total	National	State	Total	County	Municipal	Township and town	School districts	Special districts
1942	155,116	1	48	155,067	3,050	16,220	18,919	108,579	8,299
1952	116,807	1	50	116,756	3,052	16,807	17,202	67,355	12,340
1957	102,392	1	50	102,341	3,050	17,215	17,198	50,454	14,424
1962	91,237	1	50	91,186	3,043	18,000	17,142	34,678	18,323
1967	81,299	1	50	81,248	3,049	18,048	17,105	21,782	21,264
1972	78,269	1	50	78,218	3,044	18,517	16,991	15,781	23,885
1977	79,913	1	50	79,862	3,042	18,862	16,822	15,174	25,962
1982	81,831	1	50	81,780	3,041	19,076	16,734	14,851	28,078
1987	83,237	1	50	83,186	3,042	19,200	16,691	14,721	29,532
1992	86,743	1	50	86,692	3,043	19,296	16,666	14,556	33,131
1997	87,504	1	50	87,453	3,043	19,372	16,629	13,726	34,683
2002	87,576	1	50	87,525	3,043	19,429	16,504	13,506	35,052

Table 11.2. Government debt by level of government: levels and shares 1838 to 2002

	Debt ($ millions)			Share (%)			State share of
Year	State	Local	National	State	Local	National	S&L debt
1838	172	25	3	86.0	12.5	1.5	87
1841	190	25	5	86.4	11.4	2.3	88
1870	352	516	2,436	10.7	15.6	73.7	41
1880	297	826	2,090	9.2	25.7	65.0	26
1890	228	905	1,122	10.1	40.1	49.8	20
1902	230	1,877	1,178	7.0	57.1	35.9	11
1913	379	4,035	1,193	6.8	72.0	21.3	9
1922	1,131	8,978	22,963	3.4	27.1	69.4	11
1932	2,832	16,373	19,487	7.3	42.3	50.4	15
1942	3,257	16,080	67,753	3.7	18.5	77.8	17
1952	6,874	23,226	214,758	2.8	9.5	87.7	23
1962	22,023	58,779	248,010	6.7	17.9	75.4	27
1972	59,375	129,110	322,377	11.6	25.3	63.1	32
1982	147,470	257,109	924,600	11.1	19.3	69.6	36
1992	369,370	584,774	2,999,700	9.3	14.8	75.9	39
1997	456,657	764,844	3,772,300	9.1	15.3	75.5	37
2002	642,202	1,042,904	3,540,400	12.3	20.0	67.8	38

The changing number and type of governments is evidence of flexibility in American government structure. In contrast to the 35,000-plus special districts in 2002, in 1880, there were probably no more than a handful of special districts. Twenty-two percent of these districts provide infrastructure and services in natural resources (soil conservation, flood control, and water supply); 20 percent provide utilities, sewerage, solid-waste disposal, and water supply; 16 percent provide fire-protection services; 10 percent provide housing; and the remaining 32 percent are spread over a wide variety of functions. The structure and administrative form of these governments is fitted to the services they provide or investments they make. Special districts usually are fingered as major culprits in state government attempts to circumvent or subvert debt limitations by creating special governments' taxing and borrowing authority and through creative intergovernmental financial accounting.[4]

Table 11.2 gives the overall picture on government debt by level of government. The table begins with two estimates for 1838 and 1841, and then presents Census numbers from 1870 to the present. A striking feature of the table is the large variation in the debt of state governments as a share of total government debt. The three historical cycles are clear in the table. In 1841, at the end of the 1830s internal improvement boom (the first cycle), state debt was

[4] *See* Briffault, *supra* note 1. The numbers on special districts by function are taken from U.S. Census Bureau, GC02(1)-1, *Government Organization*, 1 2002 Census of Governments No. 1, 13–14 (2002).

86 percent of all government debt. By 1922, state debt had fallen to 3 percent of all government debt. Over the course of the 20th century, state debt rose again, comprising between 10 percent and 12 percent of all government debt since the 1970s, even with the enormous increase in national government borrowing since the 1980s.[5]

Relative to local government borrowing, the state decline and recovery is even more marked. In 1913, local debt was 72 percent of all government debt and more than triple national government debt. In 1932, local debt had grown to almost equal national government debt again (national debt had risen during World War I and gradually declined thereafter). The Great Depression and World War II brought national government borrowing to a prominence that it has yet to relinquish.

Although the national government borrows primarily to finance wars and budget shortfalls, state and local governments borrow primarily to fund infrastructure investments in education, transportation, and utilities. In 2002, state and local governments owed a total of $1.7 trillion. Debt for education was 20 percent of all state and local debt, and debt for utilities was 13.3 percent. The totals, however, are somewhat opaque about function, since most of the debt outstanding was issued as "public debt for private purposes" (25.3 percent) or "other" (41.3 percent).[6] A large portion of bonds issued in any year are to refinance existing debt; those debt issues end up in the "other" category, rather than in the function for which the bonds originally were issued.

We get a better idea of how much state and local governments spend on infrastructure by looking at capital outlays. Table 11.3 gives state and local expenditures for capital outlay by function in 2002, which totaled $257 billion. The last two lines of the table give the total amount of new debt issued in fiscal 2002, $262 billion, and the amount of debt retired, $162 billion. The bulk of capital outlay went for education, 27.8 percent, and highways, 25.7 percent, with a substantial amount going to utilities, 11.8 percent. Not all capital outlays were financed by borrowing, of course, but a large percentage of them were. The large majority of state and local borrowing has always gone to finance infrastructure.

In contrast, the national government spends very little on infrastructure, at least directly. In 1996, total capital outlays by all governments – national, state, and local – were $225 billion. Of that total, only $21 billion were national government outlays, and, of that, $15 billion went to national defense. Beyond infrastructure spending, the nature of national government spending differs considerably from state and local spending in that it is far less geographically

[5] Prior to World War II, the national government borrowed primarily to finance wars, but since 1945 the national government has borrowed primarily to fund budget deficiencies.

[6] U.S. Census Bureau, GC02(4)-5, *Compendium of Government Finances:* 2002, 4 2002 Census of Governments No. 5 (2002).

Table 11.3. State and local government capital outlay, fiscal 2002, by function (millions of dollars)

Outlay	Amount	Percent of total
All capital outlay	257,214	
Education	71,582	27.8
Social service	7,177	2.8
Transportation		
Highways	66,170	25.7
Air	8,551	3.3
Parking	329	0.1
Water	1,691	0.7
Public safety	8,726	3.4
Natural resources	4,247	1.7
Parks and recreation	9,093	3.5
Housing and comm. dev.	6,939	2.7
Sewerage	11,574	4.5
Solid waste	1,607	0.6
Govt. administration	8,156	3.2
Other	20,139	7.8
Utilities	30,228	11.8
Water	11,198	4.4
Electric	6,538	2.5
Gas	358	0.1
Transit	11,514	4.5
Exhibit:		
Long-term debt issued	262,339	
Long-Term debt retired	162,463	

Source: U.S. Census Bureau, GC02(4)-5, Compendium of Government Finances: 2002, 4 2002 Census of Governments No. 5 (2005).

specific and far more diffuse. In the 2002 fiscal year, the national government outlays were $2,011 billion.[7] Of the total, $348.9 billion was for defense, $853.3 billion for Social Security, Medicare, and Medicaid, and $171 billion for net interest. A whopping $1,373.2 billion, or 68 percent of all national government expenditures, was for programs whose incidence is not geographically specific or is spread throughout the country by formulaic allocations.[8] The national government therefore tends to provide "geographically dispersed public goods." When the national government spends money in one place or state, it tends to spend money in every state and in all places. We will see the reasons for the national spending patterns in the next section.

[7] Congressional Budget Office, Historical Budget Data, Table 5 (Jan. 26, 2006), *available at* http://ftp.cbo.gov/budget/historical.pdf.

[8] This is not to imply that defense spending is not geographically specific, e.g., military bases, but that military defense as a general public good is not geographically specific.

III. A POLITICAL MODEL OF GOVERNMENT SPENDING

In this section we introduce a model of how a democratic polity makes decisions about financing an infrastructure investment. We have cast the model in formal terms in other publications; here we simply give the intuition.[9]

Financing infrastructure investment in a democracy is complicated by uneven geographic distribution of benefits and costs. Investments often yield very large benefits for a small portion of citizens while imposing costs in the form of taxes for all the rest. Some districts, counties, or states benefit more because of proximity to the canal, railroad, bank, highway, sewage system, water system, electrical system, school buildings, or parks. As a result, the net benefits of government spending for each infrastructure project are negative for most voters. Under a majority-rule democracy, if a majority of the voting population receives negative benefits, no infrastructure measures will pass.

How were states able to undertake significant infrastructure investments in transportation and finance in the early 19th century? The basic intuition is simple. There are four types of government financing options for infrastructure.

A. Normal Taxation

Normal taxation relies on the use of existing taxes spread throughout the population. Under normal conditions, a democracy is politically incapable of financing geographically concentrated infrastructure by using normal taxation. A majority of voters pay taxes and receive no benefits and thus refuse to support the project

B. Universalism, or Something for Everyone

The something-for-everyone approach covers two different means of allocating government expenditures among all of the districts, counties, or states (or individuals). The first is that expenditures are governed by an explicit formula that allocates funds to states or districts. For example, the current formula allocates national highway funds among the states based on population, land area, and miles of rural post roads. Similarly, the legislation authorizing spending under homeland security guarantees each state a minimum of 0.75 percent of the total expenditures, regardless of risk and other factors. As a result, every state is guaranteed a positive share of these funds.

[9] For formal models *see* John Joseph Wallis, *Constitutions, Corporations, and Corruption*, 65 J. Econ. Hist. 211 (2005). *See also* John Joseph Wallis and Barry R. Weingast, *Equilibrium Federal Impotence: Why the States and Not the American National Government Financed Economic Development in the Antebellum Era* (Hoover Institution Stanford University Working Paper, 2005).

The second mechanism is universalism. The idea is that, although allocation to districts may be discretionary, most districts expect to receive some funds.[10] Coalition politics, demographics, and programmatic need also may play a role in allocation. Something-for-everyone policies are the easiest policies to implement politically.

The problem with something-for-everyone policies is twofold. First, standard models of a higher jurisdiction providing local projects face a standard common-pool problem, sometimes called the "law of $1/n$": In the presence of n local jurisdictions represented in the legislature, each representative comes from a district that gains the full value of the project, but pays on the order of only $1/n$ of the total costs.[11] Therefore, local voters and their representatives demand far larger local public-goods projects. The result is significant economic inefficiency. Second, this method of finance faces significant difficulties in providing large-scale, lumpy, geographically specific infrastructure investments.[12] In particular, something-for-everyone policies could not be used to finance the public infrastructure investment with the highest returns for states in the early 19th century, namely canals. It was simply too expensive to build enough canals to command a majority of votes, let alone a canal to every county in the state. In contrast, something-for-everyone could be used to finance highway construction in the 20th century, since it is feasible to build roads to every county.

C. Benefit Taxation

Benefit taxation allocates the taxes used to finance a project according to the benefits received by individuals. Let the total benefits of a project be B, which is greater than total costs. The benefits going to individual i are B_i. Then benefit taxation sets an individual's tax share as

$$t_i = B_i / B. \tag{1}$$

Under benefit-taxation schemes, every individual is (weakly) better off from provision of the project, since individuals who receive no benefits pay no taxes.

The genius of benefit taxation is twofold. First, a scheme of financing infrastructure investments with user fees closely approximates a benefit tax. Second,

[10] Barry Weingast, *A Rational Choice Perspective on Congressional Norms*, 24 Am. J. Pol. Sci. 245–262 (1979).

[11] Barry Weingast, Kenneth A. Shepsle, and Christopher Johnsen, *The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics*, 89 J. Pol. Econ. 642–664 (August 1981). (*See also* Robert P. Inman, *Federal Assistance and Local Services in the United States: The Evolution of a New Federalist Fiscal Order, in* Fiscal Federalism: Quantitative Studies. (Harvey S. Rosen, ed., 1988); Brian Knight, *Legislative Representation, Bargaining Power, and the Distribution of Federal Fund Evidence from the U.S. Senate*, presented at the conference Fiscal Challenges: An Interdisciplinary Approach to Budget Policy (Feb. 10, 2006).

[12] Interstate highways are lumpy and geographically specific, but they possess the unique feature of existing in every state – thus, something for everyone.

if property taxes capture the benefits of public services through capitalization in land values, then the property taxes serve as a form of benefit taxation.[13] The property tax has played a central role in state and local provision of infrastructure, as we subsequently discuss.

D. Taxless Finance

The final option to finance investment avoids raising new taxes to provide infrastructure altogether, and a good portion of infrastructure is provided without levying any taxes.[14] This sounds too good to be true, and often it is. A better term might be "contingent taxless finance," since these schemes implicitly require that taxpayers assume a contingent liability. The idea underlying taxless finance is to fund the current construction of a project through private sources who provide funds in exchange for certain privileges or a return on the revenue from the project itself. As this mechanism is the least well understood of the four, we provide greater detail about its operation.

For centuries, governments have used the private, joint-stock corporation as a vehicle of taxless finance. In the early 19th century, governments often provided some infrastructure or a service by chartering a private corporation to provide the infrastructure or service. The terms of the charter gave the corporation particular advantages, perhaps even a monopoly. The first business corporation in England was the Russia Company in 1553, given a monopoly on the trade with Russia. The Virginia Colony was started with the charter of the Virginia Company in 1606. This type of taxless finance was financially safe – no bonds were issued at all – but politically costly, as it involved giving special privileges to a distinct group of citizens.

Other taxless finance schemes involved state borrowing. In early-19th-century America, capital was scarce, and state governments often provided a significant amount of the capital of a private firm chartered to build a canal or a turnpike by issuing state bonds.[15] The critical piece that made these projects attractive to voters – and that made them potentially taxless – is that they held the promise that tolls or dividends from the project would service the bonds issued for construction. In reality these were contingent taxless finance projects: If the project failed to service the bonds, then citizens assumed that liability.

In some cases, as with the Erie Canal, taxpayers never had to pay any taxes *ex post* because the canal worked as promised. It generated sufficient tolls to

[13] For an accessible introduction to this literature, see the papers in Wallace Oates, Local Government and the Property Tax (2001).

[14] The issue of taxation is at the heart of the legal dispute over public authority and special district finance. If special local governments levy taxes, then their debts should count against state and/or local debt limitations. If their revenues are fees, then their debts should not count.

[15] In the 20th century the national government created and invested in a number of private corporations for similar reasons, including Fannie Mae and Sallie Mae.

service the canal bonds. In other cases, such as the Pennsylvania Mainline Canal begun in 1826, taxpayers were left holding the bag when the venture failed and the state went bankrupt in 1842. Taxless finance schemes also were used at the national level to finance the First and Second Bank of the United States in 1791 and 1816 (successfully) and to finance the Central Pacific and Union Pacific railroads in the 1860s (with less salutary results).

The central problem with taxless finance is that it can be politically manipulated. How can voters tell if the promoters' promises are reliable? Voters in Pennsylvania in 1828, Indiana in 1836, and Missouri in 1854 were encouraged to support bond issues under the impression that they would never have to service the bonds. In each of these cases the expectations were not fulfilled, and voters eventually had to pay higher taxes to service state debts. Because those making the investment do not bear the full consequences of their decisions, they have less incentive to ensure that the project generates a net surplus. This mechanism requires that voters have some belief in the project's likely success. Yet voters' expectations are not likely to be accurate, particularly voters who are far removed from the project's locality. No market mechanism coordinates these beliefs or provides evidence for false ones. Moreover, because of the contingent liability, bond markets provide a weak constraint in this case: Bondholders know that if the project fails, the general taxpayers will be asked to cover the bonds.

E. Implications

This approach yields the following predictions. First, normal taxation rarely will be used to finance infrastructure. Second, something-for-everyone is politically sustainable, but not practical for large specific projects. It may be used for dispersed projects and is thus more likely to be used by the national government (such as for lighthouses). We should observe both benefit taxation and taxless finance used to fund infrastructure. However, the Constitution prohibits the national government from using benefit taxation. The states therefore should be observed to use this method, while the federal government should not. Taken together, these implications suggest that states, and not the national government, should finance the very largest infrastructure projects in the early 19th century.

IV. EVIDENCE FROM THE FIRST CYCLE: STATE AND NATIONAL BORROWING AND SPENDING, 1790 TO 1860

Tables 11.4 and 11.5 present evidence in support of our predictions. Table 11.4 studies the $60 million that the national government spent on transportation improvements between 1790 and 1860 (plus an item about the Union

Table 11.4. Model predictions and national spending patterns, 1790 to 1865

Method	Prediction	Amount ($)	Cases
Normal taxation	No	1,917,000	Chesapeake and Delaware
			Chesapeake and Ohio
Something for everyone	Yes, small projects	41,435,000	Unspecified navigation
			Rivers
			Harbors
			Aids to navigation
			Internal navigation
			Miscellaneous roads
Benefit taxation	No	0	
Taxless finance	Yes, big projects	4,750,000	Public land funds
		6,800,000	Cumberland Road
		5,250,000	Land grant equivalents (4,000,000 acres)
Total		60,152,000	
Other taxless finance			
		2,000,000	First Bank of the United States
		7,000,000	Second Bank of the United States
		30,000,000	Union Pacific Railroad

Source: John Joseph Wallis and Barry R. Weingast, *Equilibrium Federal Impotence: Why the States and Not the American National Government Financed Economic Development in the Antebellum Era* (Hoover Institution Stanford University Working Paper, 2005).

Pacific Railroad). It organizes these expenditures by method of finance: $2 million for projects financed by normal taxation; $41 million for something-for-everyone projects; nothing financed by benefit taxation; and $17 million for taxless finance projects. Table 11.5 presents information on the $186 million of

Table 11.5. Model predictions and state spending patterns, 1790 to 1840, from state debt outstanding in 1841

Method	Prediction	Amount ($)	Cases
Normal taxation	No	0	
Something for everyone	Yes, but unlikely projects are too small	0	Some education and roads
Benefit taxation	Yes	53,000,000	Canals and RR, in NY, OH, IN, IL
Taxless finance	Yes	53,000,000	Banks in the South
		80,000,000	Transportation in the North
Total		186,000,000	

Source: John Joseph Wallis and Barry R. Weingast, *Equilibrium Federal Impotence: Why the States and Not the American National Government Financed Economic Development in the Antebellum Era* (Hoover Institution Stanford University Working Paper, 2005).

the state debt outstanding in 1841 that can be allocated to one of the four forms of financing.[16] As predicted, none of the state projects used normal taxation or something-for-everyone projects, but $53 million was borrowed for projects financed by benefit taxation and $133 million was borrowed for taxless finance projects.

The national government relied extensively on something-for-everyone projects. Typically, national transportation projects were financed through omnibus "rivers and harbor" legislation, including funding for dozens of individual projects spread throughout the country. Most of these projects were small and localized. Throughout the nation's history, when the national government participated in infrastructure investment, it tended to use something-for-everyone policies. Even today, national government expenditures are concentrated in geographically dispersed functions. State governments, on the other hand, initially used a mix of benefit taxation and taxless finance. It was in reaction to the dangers of taxless finance that the first budget rules were adopted in the 1840s.

V. THE FIRST RULES AND THEIR EFFECT ON STATES: THE FIRST CYCLE OF CONSTITUTIONAL CHANGES

Between 1790 and 1841, state governments borrowed more than $200 million to invest in canals, railroads, and banks.[17] In 1841 and 1842, eight states and the Territory of Florida defaulted on their sovereign debts. Florida and Mississippi repudiated all of their debts. Louisiana, Arkansas, and Michigan repudiated part of their debts.

The defaults created a political crisis. In response, 12 states wrote new constitutions between 1842 and 1852. Eleven of those constitutions mandated procedural restrictions on the way state and local governments borrowed money (Indiana banned state borrowing altogether). These constitutions contained the first constitutional provisions with respect to borrowing. To be clear, we use the phrase *debt restrictions* to mean procedural restrictions on the issue of debt, and the phrase *debt limitation* to mean absolute limits on the amount of debt a state or local government can issue. Absolute limits may be stated in dollars or as fractions or percentages of assessed value or personal income.

Significantly, the constitutional provisions were not intended to eliminate state and local borrowing. Eliminating taxless finance was the goal, and doing

[16] Over the entire period 1790 to 1860, state and local governments spent an estimated $450 million on transportation investments, seven times the national expenditures. Carter Goodrich, Government Promotion of Canals and Railroads, 1800–1890 (1960).

[17] Reginald C. McGrane, Foreign Bondholders and American State Debts (1935); B. U. Ratchford, American State Debts (1941); Wallis, *supra* note 10; John Joseph Wallis, Richard Sylla, and Arthur Grinath, *Sovereign Default and Repudiation* (Nat'l Bureau of Econ. Research Working Paper No.W-10753, 2004).

that involved three related constitutional changes. First, states had to prohibit themselves from investing in private corporations or giving individual corporations special deals to provide public services. The result was the widespread adoption of general incorporation acts and prohibitions on public investment in private corporations. Second, states had to prohibit themselves from giving tax breaks to corporations and other interests to provide public services. The result was the general property tax imposed at the same rate on all property. Third, states had to require that taxes be raised before money was borrowed. This required voters to approve tax increases (and legislatures to implement tax increases).[18]

It is critical to understand that states sought to eliminate taxless finance in the 1840s, not to prevent government borrowing.[19] With the exception of Indiana, every state allowed borrowing, in general or for specific purposes, subject to these procedural requirements: (1) the purpose and amount of debt issued be identified; (2) taxes sufficient to service and redeem the debt be levied; and (3) voters approve the new taxes in a referendum.[20]

Delegates expressed their convictions at the constitutional conventions in the 1840s. For example, Judge Kilgore of Indiana used the following words in favor of procedural restrictions and against the absolute ban on state debt in the Indiana constitutional debate:

> If, with the light of the past to guide them, with the heavy burthens [*sic*] of the present to remind them of past errors, the people coolly and deliberately decide

[18] The text of the New Jersey Constitution of 1844, Article 4, Section 6, Part 4 is typical of the 1840s procedural debt restrictions:

> The legislature shall not, in any manner, create any debt or debts, liability or liabilities, of the State which shall, singly or in the aggregate with any previous debts or liabilities, at any time exceed one hundred thousand dollars, except for purposes of war, or to repel invasion, or to suppress insurrection, unless the same shall be authorized by a law for some single object or work, to be distinctly specified therein; which law shall provide the ways and means, exclusive of loans, to pay the interest of such debt or liability as it falls due, and also to pay and discharge the principal of such debt or liability within thirty five years from the time of the contracting thereof, and shall be irrepealable until such debt or liability, and the interest thereon, are fully paid and discharged; and no such law shall take effect until it shall, at a general election, have been submitted to the people, and have received the sanction of a majority of all the votes cast for and against it, at such election; and all money to be raised by the authority of such law shall be applied only to the specific object stated therein, and to the payment of the debt thereby created. This section shall not be construed to refer to any money, that has been, or may be, deposited with this State by the government of the United States.

See The NBER/Maryland State Constitution Project, *available at* http://www.stateconstitutions.umd.edu.

[19] The evidence and argument is detailed in Wallis, *supra* note 10. The major conclusion of Goodrich's article *The Revulsion Against Internal Improvements* is that states were not trying to prevent state and local investments in infrastructure, but to modify the process through which projects were selected and funded. *See* Carter Goodrich, *The Revulsion Against Internal Improvements*, 10 J. Econ. Hist.145 (1950).

[20] The constitutional changes are described in detail in Wallis, *supra* note 10.

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> at the ballot-boxes to again borrow money, I shall aid to place no Constitutional barriers in their way to prohibit them from carrying out their will; *provided*, sir, that at the time they give the Legislature authority to contract a debt they provide by direct taxation for the payment of the interest, and the canceling of the principal, within twenty-five years. Right here, sir, and nowhere's else, was the great error committed by the people and their representatives in 1836 [leading to Indiana's debt crisis]. Gentlemen may confine themselves to the simple assertion that the people of that day were mad; I shall not deny it; they were mad, and very mad; but, Mr. President, had a provision been made before the public debt was created that a direct tax must be levied, high enough to pay the interest and to wipe out the whole debt in eighteen or twenty-five years, all would have been comparatively well. A provision of this kind, sir, would have brought the people to their right senses, and my word for it, before State Bonds to the amount of four millions of dollars had been sold, they would have risen and denounced the whole system as projected.[21]

Judge Kilgore castigated the perils of taxless finance and called for benefit taxation in the form of a direct tax, which in 1850 meant *ad valorem* property taxation, before any future debt could be issued.[22]

States changed their constitutions to require that taxes be raised before bonds were issued and so eliminated taxless finance. Since everyone's taxes went up immediately, such tax increases were normal taxation. Nonetheless, because of the way property taxes were administered in the 19th century, these tax increases had an element of benefit taxation. States did not set a permanent tax rate and then collect whatever taxes came in. Typically the state or local government established an amount to be raised by the property tax, divided by total assessed valuation, to determine that year's tax rate, and then allocated the taxes amongst taxpayers according to their share in the assessed value of all the property in the state. This means that, holding constant the total amount raised by the property tax, if property values rise in areas that benefit from the project, so too will property taxes, implying that property taxes fall in areas where property values do not rise.

In terms of the model we presented earlier, a bond referendum eliminates taxless finance while creating a higher bar for benefit taxation. Since all voters are voting to have their current taxes raised immediately, even voters who receive no benefits from the project still pay higher taxes. Now a majority of voters must receive positive net benefits before they will vote yes on the bond proposal.

[21] 1 Report of the Debates and Proceedings of the Convention for the Revision of the Constitution of the State of Indiana 1850 676, Indiana Constitutional Convention (1850–1851).

[22] Events in Indiana are considered in detail in John Joseph Wallis, *The Property Tax as a Coordinating Device: Financing Indiana's Mammoth System of Internal Improvements, 1835 to 1842*, 40 Explorations in Econ. Hist. 223 (2003). The general movement to rewrite constitutions and eliminate taxless finance is the subject of Wallis, *supra* note 10.

We expect three results. In general, it will be easier to obtain majorities in smaller jurisdictions where infrastructure provision more closely matches the voters. First, debt restrictions should reduce the borrowing of state governments. Second, debt restrictions may increase local borrowing.[23] Third, debt restrictions create pressure to form new governments whose boundaries closely match the beneficiaries of the infrastructure investment. These special districts provide better matches of taxpayers and beneficiaries of public services. Because a greater portion of voters experience a rise in property values, voters are more likely to approve surplus-generating projects.

VI. THE QUANTITATIVE EFFECTS ON STATE DEBT, 1841 TO 1860

Table 11.6 provides information on state debt in 1841, 1853, and 1860, and state and local debt in 1870, 1880, 1890, and 1902. We take these numbers from the Census, which did not collect information on local government until 1870.[24] The first panel of the table gives average debt by level of government in the nation at each date, as well as the number of states in existence at that date and the aggregate level of all debt. The second panel of the table reports similar averages for states without any type of state-level debt restrictions. The third panel reports averages for states with debt restrictions. The first state debt restrictions were adopted after 1842, so none of the states in 1841 had debt restrictions.

Table 11.7 compares 1841 and 1860 by using a difference-in-difference estimate. Average state debt, in levels and per capita, are given in the first rows of the table for states with and without debt restrictions. The difference in the level and per capita debt is given in the last column of the table. For example, between 1841 and 1860, total debt rose in states without restrictions from $3,185,239 to $7,733,462, a difference of $4,548,224. In contrast, total state debt in states with restrictions fell from $11,827,651 to $8,314,827, a difference of $3,512,825.[25] The difference in the two differences provides an estimate of the effect of state debt restrictions in reducing state borrowing. States without debt restrictions increased their debts by $8,061,048 more than states with debt restrictions. The effect of debt restrictions was equally large if measured in per capita terms. In 1840, nominal per capita income was $91 and in 1860 it was

[23] There are two qualifications. First, if state and local projects are not substitutes, then reducing state borrowing should have no effect on local borrowing. It appears that state and local spending were good substitutes for one another. Second, state debt restrictions also may apply to local as well as state governments. This occurred later in the 19th century.

[24] Hillhouse suggests that local government debt was quite small in 1840, only about $25 million. While it grew before the Civil War, there are no acceptable aggregate estimates of local debt, although there are series for individual cities. Albert Miller Hillhouse, Municipal Bonds: A Century of Experience (1936).

[25] There is a slight rounding error in the calculation. The exact difference is $3,512,824.77.

Table 11.6. State, local, and total (state and local) debt, 1841 to 1902

	State debt ($)		Local debt ($)		All debt ($)			
Year	**Average**	**Average per capita**	**Average**	**Average per capita**	**Average**	**Average per capita**	***N***	**Level of all debt($)**
All states 1841	7,026,311	14.76					27	189,710,399
1853	6,210,578	8.86					31	192,527,913
1860	8,042,312	8.83					32	257,353,990
1870	9,536,936	11.87	13,835,629	12.45	23,372,567	24.32	37	864,784,971
1880	6,844,233	5.62	24,089,003	15.70	30,933,237	21.32	38	1,175,463,010
1890	4,717,936	3.93	20,484,164	14.16	25,202,100	18.09	44	1,108,892,382
1902	5,120,332	4.85	35,651,168	21.11	40,771,500	25.97	45	1,834,717,513
No restrictions								
1841	7,026,311	14.76					27	189,710,399
1853	5,385,091	7.08					16	86,161,459
1860	7,733,462	12.71					15	116,001,937
1870	13,486,446	19.72	9,363,183	10.97	22,849,633	30.69	15	342,744,489
1880	7,915,780	8.18	20,696,995	21.41	28,612,775	29.59	6	171,676,647
1890	3,901,057	4.80	17,921,466	16.56	21,822,522	21.36	6	130,935,133
1902	11,918,256	5.73	32,523,594	21.95	44,441,850	27.67	6	266,651,102
Restrictions								
1841*	–						0	
1853	7,091,097	10.76					15	106,366,454
1860	8,314,827	5.41					17	141,352,053
1870	6,844,089	6.51	16,885,024	13.45	23,729,113	19.97	22	522,040,482
1880	6,643,318	5.14	24,725,005	14.62	31,368,324	19.77	32	1,003,786,363
1890	4,846,917	3.79	20,888,800	13.79	25,735,717	17.58	38	977,957,249
1902	4,074,498	4.72	36,132,333	20.99	40,206,831	25.70	39	1,568,066,411

*In 1841, no states had debt restrictions.

Sources: 1841: William Cost Johnson, Report of William Cost Johnson, No. 296, 27th Cong., 3d Sess. (1843). 1853: B. U. Ratchford, American State Debts 127, Table 9 (Duke University Press, 1941). (Ratchford constructed his estimates for 1853 based on Census Office, Department of the Interior, History of States Debts, in Report on Valuation, Taxation, and Public Indebtedness, The Tenth Census, 1884.) 1860–1902: Census Office, Department of the Interior, The Eighth Census (1860); Census Office, Department of the Interior, The Ninth Census (1870); Census Office, Department of the Interior, The Tenth Census (1880); Census Office, Department of the Interior, The Eleventh Census (1890); U.S. Census Bureau, 1902 Census of Governments (1902).

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Table 11.7. Difference-in-difference estimates of the effect of state debt restrictions, 1841 to 1860

Average state debt		1841 ($) (1)	1860 ($) (2)	Difference ($) (2)–(1)
Levels of debt				
No restriction	(3)	3,185,239	7,733,462	4,548,224
Restriction	(4)	11,827,651	8,314,827	(3,512,825)
Difference-in-difference	(3)-(4)			8,061,048
Per capita debt	(5)			
No restriction	(6)	12.11	12.71	0.60
Restriction	(5)-(6)	18.07	5.41	(12.66)
Difference-in-difference				13.26

$137.[26] States with debt restrictions had $13.26 less per capita debt than states without restrictions. The debt restrictions therefore had large and immediate impacts on state borrowing before the Civil War.

The table provides a nice example of endogeneity. The states that ultimately adopted debt restrictions had much higher total and per capita debts in 1841 than did states without debt restrictions. The debt restrictions were the result, not the cause, of high debts in 1841.[27] Total state debt per state stayed roughly constant between 1841 and 1860, but state debt per capita fell steadily over those years (see Table 11.9, subsequently cited near Section VIII).

State debts rose dramatically during the Civil War, as evidenced by the increase in state debt from 1860 and 1870. So there is a prewar, during the war, and postwar story to be told. Debt restrictions mattered during the war. Between 1860 and 1870, total debt rose from $8 million to $13 million in states without restrictions (from $12.71 to $19.72 per capita), and fell from $8 million to $7 million in states with restrictions ($6.51 to $5.14 per capita).

VII. PLAYING AGAINST THE RULE: LOCAL GOVERNMENTS IN THE SECOND CYCLE, 1870 TO 1902

During the 1870s states adopted new or made substantial changes to their existing debt provisions that affected both the state and local levels. State debt restrictions really mattered for state borrowing between 1841 and 1870. What about local borrowing?

[26] Louis D. Johnston and Samuel H. Williamson, *The Annual Real and Nominal GDP for the United States, 1790 – Present*, Econ. Hist. Serv., Apr. 1, 2006, *available at* http://eh.net/hmit/gdp/.

[27] This is not the case in every state. New Jersey and Rhode Island had no state debts and were the first two states to adopt procedural restrictions in the 1840s.

The Census did not begin collecting systematic information on local governments until 1870 and did not conduct a complete census of all local governments until 1902. We therefore have only scattered information about local government borrowing, taxing, and spending before the Civil War. We expect that procedural restrictions on state borrowing will increase local borrowing, even if local governments face the same procedural restrictions. Thus it may appear that governments are subverting the intent of the constitutional rule by shifting borrowing to the local level. When local governments increase their borrowing, they appear to be "playing against the rule": a creative reaction by which political officials and citizens create new ways to borrow within the rules.

Did this happen after 1870? We know from Table 11.2 that state debts were roughly nine times local debts in 1841, and that by 1902, local debts were roughly eight times state debts. Did debt restrictions and limitations have anything to do with the shift?

During the 1870s, states significantly tightened their constitutional restrictions on debt. As already discussed, states in the North and South borrowed heavily during the Civil War and came out of the war with substantial debts. As new states entered, some adopted procedural debt restrictions and others adopted more stringent debt limitations. Table 11.8 provides a brief summary of state constitutional provisions with respect to state and local borrowing.

Columns 2 and 3 of the table present state debt restrictions before 1860 and between 1865 and 1890. States with a "0" had no restrictions on debt; states with a "1" had some type of procedural restrictions; states with a "2" had provisions that limited the absolute amount of debt issued in some way.[28] States also began limiting the borrowing of local governments by absolute prohibitions on debt issue, debt limitations tied to property valuations, limits on the purpose of debt issue, and several cases of tax or expenditure limitations. Column 4 notes whether local governments were, in any substantial way, affected by state rules.

Between 1865 and 1875, Southern states underwent Reconstruction. In the 1870s, Southern states rewrote their constitutions and several formally repudiated their Reconstruction debts. By 1880, all of the former Confederate states except Arkansas had adopted some form of debt restriction; Georgia, Louisiana, and Virginia adopted absolute limits, and most imposed a variety of restrictions on local governments.

Between 1870 and 1902, the growth of the economy, industrialization, and immigration all fostered rapid increases in the size of cities, particularly the large

[28] Whether a state is a "1" or a "2" is a matter of interpretation. Some states appear to have absolute limits, but they state them in a way that gives the states a considerable amount of leeway in the amount of debt they issue, and thus are classified as restricted states, "1," rather than limited states, "2." Ohio and Alabama are examples of such states.

Table 11.8. State constitutional debt and borrowing provisions, 1841 to 1890

State	State debt measure		Local provisions	Debt measure	Local provisions
	Pre-1860 (1)	Post-1860 (2)	(3)	(4)	(5)
Alabama	0	2	1	1875	1875
Arkansas	0	0	1		1874
California	1	1	1	1849, 1879	1879
Colorado		2	1	1876	1876
Connecticut	0	0	1		1877
Delaware	0	0			
Florida	0	1	1	1868, 1875	1868, 1875
Georgia	0	2	1	1877	1877
Idaho		1	1	1889	1889
Illinois	1	1	1	1848, 1870	1870
Indiana*	2	2	1	1851	1851, 1881
Iowa	1	1		1857	
Kansas	1	1		1859	
Kentucky	1	1		1850	
Louisiana**	1	2	1	1845, 1879	1879
Maine*	2	2	1		1868, 1878
Maryland	1	1	1	1851, 1867	1867
Massachusetts	0	0			
Michigan	1	1	1	1850	1850
Minnesota	1	1	1	1857	1879
Mississippi	0	1	1	1875	1875
Missouri	0	2	1	1875	1875
Montana	1	1	1	1889	1889
Nebraska		2	1	1866, 1875	1875
Nevada		2	1	1864	1864
New Hampshire	0	0	1		1877
New Jersey	1	1		1844	
New York	1	1	1	1846	1846, 1874, 1884
North Carolina	0	1	1	1876	1876
North Dakota		2		1889	1889
Ohio	1	1	1	1851	1851
Oregon	2	2	1	1857	1857
Pennsylvania	1	1	1	1858, 1873	1873
Rhode Island	1	1			
South Carolina	0	1	1	1868, 1873, 1884	1868, 1884
South Dakota		2		1889	1889
Tennessee	0	1	1	1870	1870
Texas	2	2		1845, 1876	1876
Utah		2			
Vermont	0	0			
Virginia	0	2		1870	
Washington		1		1889	1889

(*continued*)

Table 11.8 (*continued*)

State	State debt measure		Local provisions	Debt measure	Local provisions
	Pre-1860 (1)	Post-1860 (2)	(3)	(4)	(5)
West Virginia		2	1	1872	1872
Wisconsin	1	1	1	1848	1848, 1874
Wyoming		1	1	1889	1889

Note: The provision in the table is taken from the Census reports from 1880 and 1890, supplemented by the constitutional texts on the NBER/Maryland Constitution project (see subsequent source note). In the second and third columns, states are blank if they are not yet states (with the exception of Florida in 1841); have a "0" if they have no restrictions on state debt; have a "1" if they have a restriction that limits the procedures by which states can issue debts, typically a referendum; and have a "2" if the have absolute dollar limits on debt. States with local provisions, the fourth column, are states with some type of restriction or regulation on the issue of debt by local governments. These range from procedural restrictions, e.g., referendums, to absolute dollar limits and percentage valuation limits.

The dates in Column 5 refer to the first year a state adopted a debt restriction or limitation, and subsequent years where significant changes occurred. The dates are not absolutely accurate, in the sense that they do not consider the Confederate or Reconstruction constitutions in Southern states. Several Reconstruction constitutions had debt limits that were ignored, and interpreting those limits is problematic. The dates in Column 6 refer, with the same caveat, to local provisions.

*Indiana and Maine had absolute limit provisions in their constitutions before the Civil War.

**Louisiana wrote constitutions in 1845, 1852, 1861, 1864, 1868, and 1879, as well as in 1898 and 1913. The table only refers to the original 1845 provisions and the modifications made in 1875.

Source: Census Office, Department of the Interior, The Tenth Census (1880); Census Office, Department of the Interior, The Eleventh Census (1890); The NBER/Maryland State Constitution Project, http://www.stateconstitutions.umd.edu.

urban commercial and industrial centers. Urbanization should have increased local government borrowing even in the absence of changes in constitutional borrowing rules.

The question we want to ask, therefore, is whether local governments in states with state debt restrictions had higher or lower debts over the entire period from 1870 to 1902. The results are presented in Table 11.9. These regressions take advantage of the changing debt requirements over time, the rise and fall of state and local debts at the state level, and changes in urbanization and population; they also add dummy variables for individual years. State-level debt restrictions lower state borrowing, as shown in Panel A of the table. In the local regressions, Panel B, states with state-level debt restrictions *increase* local debt, while local debt restrictions reduce local debt.[29] More urban states have much more local

[29] The coefficients on state and local debt restrictions in the local regressions are not statistically significant, and there are issues of interpretation here. Since this is the entire universe of states, the coefficients represent the true effect of the debt restrictions on local debt. But the high standard errors indicate that the effect varies widely across states. The coefficients on state debt restrictions in the state equation are both economically and statistically significant.

Table 11.9. Regression estimates of state and local debt, 1870 to 1902

Panel A: State								
Dependent	**Level of state debt**		**Per capita state debt**		**Level of state debt**		**Per capita state debt**	
Independent variable	**Coefficient**	**st error**	**Coefficient**	**st error**	**Coefficient**	**st error**	**Coefficient**	**st error**
Intercept	9,292,359	2,029,667	13.77	2.74	10,161,444	2,165,667	16.53	2.97
State Restriction	(4,905,118)	1,901,064	−7.46	2.56	(4,614,832)	1,964,779	−5.21	2.69
Urban Percent	4,034,493	3,906,331	−4.92	5.27	2,744,200	4,107,100	−0.51	5.63
1880 Dummy					(2,142,993)	2,283,895	−4.77	3.13
1890 Dummy					(4,617,386)	2,231,702	−6.35	3.06
1902 Dummy					(4,674,494)	2,262,138	−5.07	3.10
Population					1,657	631	−0.00	0.00
R2	0.05		0.06		0.12		0.09	
Adj-R2	0.04		0.04		0.08		0.06	
Panel B: Local								
Dependent	**Level of local debt**		**Per capita local debt**		**Level of local debt**		**Per capita local debt**	
Independent variable	**Coefficient**	**st error**	**Coefficient**	**st error**	**Coefficient**	**st error**	**Coefficient**	**st error**
Intercept	(18,410,000)	7,760,798	4.58	1.83	(26,320,000)	6,323,013	3.39	2.16
Local Restriction	11,064,605	7,098,332	−1.83	1.67	229,460	5,713,277	−2.65	1.95
State Restriction					(3,041,143)	5,884,710	2.09	2.01
Urban Percent	124,420,000	16,214,434	46.20	3.82	73,658,320	11,959,404	47.55	4.08
1880 Dummy					1,829,106	6,822,660	2.55	2.33
1890 Dummy					(8,113,325)	6,798,510	−1.39	2.32
1902 Dummy					(1,665,995)	6,883,020	4.37	2.35
Population					25,005	1,819	−0.00	0.00
R2	0.27		0.49		0.68		0.53	
Adj-R2	0.27		0.48		0.67		0.51	

(*continued*)

Table 11.9 (*continued*)

Panel C: Total								
Dependent	**Level of total debt**		**Per capita total debt**		**Level of total debt**		**Per capita total debt**	
Independent variable	**Coefficient**	**st error**	**Coefficient**	**st error**	**Coefficient**	**st error**	**Coefficient**	**st error**
Intercept	(10,980,000)	9,762,210	19.54	4.22	(15,550,000)	6,960,270	20.68	4.39
Local Restriction	2,506,339	9,354,929	−3.22	4.05	(6,825,340)	6,477,793	−2.09	4.08
State Restriction	5,726,548	8,436,828	−7.82	3.65	(2,470,045)	6,289,083	−6.03	3.96
Urban Percent	127,800,000	17,633,198	40.41	7.63	75,323,769	13,164,718	45.69	8.30
1880 Dummy					623,064	7,510,274	−1.04	4.73
1890 Dummy					(11,620,000)	7,483,689	−6.36	4.72
1902 Dummy					(5,225,603)	7,576,717	0.70	4.78
Pop					26,773	2,002	−0.00	0.00
R2	0.25		0.20		0.66		0.23	
Adj-R2	0.24		0.18		0.65		0.19	

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debt, but the effect of debt restrictions on local borrowing remains even when urbanization is controlled for. The effect of state debt restrictions was to raise local borrowing.

VIII. COMPLICATIONS AND HOME RULE IN THE SECOND CYCLE, 1875 TO 1900

The empirical results demonstrate that states with debt restrictions and limitations had smaller state debts and larger local debts, controlling for population size and urbanization. The results do not, however, establish a causal relationship between state fiscal institutions and the changes in the structure of state and local government. Many other factors also changed at the end of the 19th century, and identifying causal relationships would require far more detailed empirical tests than we undertake in this chapter. Rather than giving up in the face of complexity, however, it seems that we can grasp one of the thorniest problems and turn it to our advantage.

"Home rule" is the historical term associated with the movement that began in the late 19th century to give local governments, initially municipalities and counties, more control over their internal structure, elected officials, and policies. Home rule presents a serious statistical problem, since changes in local government borrowing may have been a result of changes in the fiscal rules under which local governments operated. While debt restrictions can be characterized by a small set of quantitative variables, home-rule provisions are enormously complicated and cannot be easily incorporated into an empirical analysis. Moreover, the late 19th century was not just a period of home rule, but it was also a period of state rule. Many more state governments tightened their control over local governments (Table 11.8) than loosened control through home rule. States also began imposing administrative control over local specific public functions, such as water supply and sewers.[30] A close look at the changing relationship between state and local governments after 1870 reveals that no simple empirical analysis will allow us to delineate the lines of causation and interaction between fiscal and political institutions and fiscal outcomes.

On the positive side, however, it seems clear that the regulation of state debt issue quickly led to the involvement of states in local debt issue. New York provides a good example. Article 8, Section 9 of the New York Constitution of 1846 (which enacted the state procedural debt restriction) read as follows: "It shall be the duty of the Legislature to provide for the organization of cities and incorporated villages, and to restrict their power of taxation, assessment, borrowing money, contracting debts and loaning their credit." In 1875, the Constitution was amended (Article 9, Section 11) to make explicit the way in

[30] *See* Jon C. Teaford, The Unheralded Triumph: City Government in America, 1870–1900 104 (1984).

which the state regulated local debt issue: "No county, city, town or village shall hereafter give any money or property, or loan its money or credit to or in aid of any individual, association or corporation, or become directly or indirectly the owner of stock in, or bonds of, any association or corporation; nor shall any such county, city, town or village be allowed to incur any indebtedness except for county, city, town or village purposes."

The section was amended again in 1884 to include additional provisions that did the following:

1) They allowed local governments to borrow without limit for "aid or support of its poor."
2) They limited borrowing by counties or cities with more than 100,000 inhabitants from becoming indebted for more than 10 percent of the assessed value of real estate.
3) They allowed counties and cities to issue "certificates of indebtedness or revenue bonds issued in anticipation of the collection of taxes."
4) They allowed for the issue of "bonds to provide for the supply of water," but mandated a maximum term of 20 years and the establishment of a sinking fund.
5) They imposed a tax limit in counties and cities with more than 100,000 inhabitants of 2 percent of the assessed valuation of real and personal property.

The specific nature of the 1884 amendments is revealing. New York allowed more freedom for local governments to borrow to finance relief expenditures or water systems. But it clamped down on the ability of large cities to issue bonds, both with a restriction on the amount of debt that could be issued and the amount of taxes that could be raised to service debt. At the same time it opened a loophole for debt secured by future revenues. It is difficult to determine whether, on balance, the specifics of the amendment made it harder or easier for local governments in New York to borrow.

New York's regulation of local borrowing was not unique in timing or complexity. States began asserting a formal constitutional right to limit the debt of local governments and public corporations in the 1840s (Table 11.8). By 1890, 36 states had imposed, or asserted the right to impose, regulations on local borrowing. In 22 states, constitutional provisions limited the amount of debt local governments could issue; 16 states had specific limits, and 12 of those states specified maximum debts as a percentage of assessed property value.

Without a great deal more empirical work, it impossible to say whether debt restrictions caused a change in state or local borrowing, or the reverse. But they do support a major element in our history of the second cycle. States deliberately responded to the increase in local borrowing by changing the constitutional structure of the state and local system. Moving government activity to the local level was not something that just happened. State and local governments

consciously decided to have local governments assume more of the burden of infrastructure investment and public-service provision.

IX. THE RISE OF SPECIAL-PURPOSE GOVERNMENTS IN THE SECOND AND THIRD CYCLES, 1850 TO 1933

The reaction of both state and local governments to the constitutional changes of the 1840s opened up new possibilities and challenges, many unanticipated. In 1851, five years after enshrining a procedural debt limitation in the constitution of 1846, the New York legislature "enacted a law directing the Comptroller to issue $9,000,000 of 'canal revenue certificates' for the purpose of enlarging the Erie Canal and completing the Genesee Valley and Black River Canals."[31] The bonds were issued without a tax increase or a bond referendum. The bonds were to be paid out of a special fund established with future surplus canal revenues. The bond issue was upheld in *People v. Newell*,[32] but overturned as unconstitutional in *Rodman v. Munson*.[33]

The decision overturning the law induced some consternation, ultimately leading to a bond referendum and tax increase to fund the debt. The argument proposed in favor of the law "that the constitution did not intend to prohibit debts 'which would certainly and eventually pay for themselves'" was refuted decisively by Judge Strong[34]:

> Indeed, the most extravagant works in the state, and some of them were very extravagant, had been urgently supported, and finally adopted, upon that supposition. The convention [in 1846] had the sagacity to see that the practice of granting away the public money upon the annual productiveness of such works was a dangerous one, and that in fact no human foresight could enable the legislature to determine with certainty that any projected improvements "would certainly and inevitable [*sic*] pay for itself." Indeed, there had been sad mistakes on that subject, for which the state had severely suffered. The convention knew that the legislature had too readily listened to sanguine, loose and interested calculations, and no doubt designed to avert the danger of incurring heavy debts under such pretenses.[35]

Judge Strong understood that the purpose of the constitutional debt restriction was precisely to eliminate taxless finance, to make it impossible for promoters to fund projects that would "certainly and eventually pay for themselves"

[31] William J. Quirk and Lawrence E. Wein, *A Short Constitutional History of Entities Commonly Known as Authorities*, 56 Cornell L. Rev. 521, 538 (1971).
[32] *People v. Newell*, 13 Barb. 86 (N.Y. Sup. Ct.), *rev'd*, 7 N.Y. 9 (1852), *cited in* Quirk and Wein, *supra* note 32, at 539.
[33] *Rodman v. Munson*, 13 Barb. 63 (N.Y. Sup. Ct.), *aff'd*, 13 Barb. 188 (N.Y. Sup. Ct.), *aff'd sub nom. Newell v. People*, 7 N.Y. 9 (1852), *cited in* Quirk and Wein, *supra* note 32, at 539.
[34] Quirk and Wein, *supra* note 32, at 539, citing *Rodman v. Munson*, 13. Barb. 188, 204 (N.Y. Sup. Ct), *aff'd sub nom. Newell v. People*, 7 N.Y. 9 (1852).
[35] *Ibid.*

without raising current taxes. Judge Strong spoke against taxless finance as clearly as Judge Kilgore had in Indiana.

But the underlying issue was more complicated. What was the problem with a state's issuing bonds whose security was surplus canal funds, for which creditors could not make claims on the state in the absence of a canal fund surplus? The impossibility of clearly defining a canal fund surplus doomed the cause of this particular issue of New York bonds. But surely there were cases where a distinct fiscal source could be identified, the burden of which fell primarily on individuals who benefited from the service provided by the government and where it was possible to insulate the state and its taxpayers for liability in case the revenues did not materialize. Equally, there were cases where a majority (or more) of taxpayers could be induced to acquiesce to a rate increase to fund bonds for the provision of a valuable public service. Sometimes the taxpayers were located within the boundaries of an existing government, but sometimes it was necessary to create such a government, a special district or public authority (e.g., the New York Port Authority), whose boundaries overlapped several existing jurisdictions or whose boundaries were smaller than an existing jurisdiction (e.g., school districts).

Whether these special districts were financed by user fees or by property taxes, it was possible to create governments financed by benefit taxation. Good economic and political reasons existed for creating more local governments. Indeed, if we press the logic of social welfare maximization embodied in our conceptual model, a society with flexible governmental forms can craft governments to provide infrastructure and market-enhancing public goods in ways that a society with inflexible government forms (e.g., boundaries) cannot. Better outcomes can be reached by allowing fragmentation of government into flexible, potentially overlapping government units – what might be called "Tieboutizing" local governments. But these benefits come with serious downside risk.

First, it was absolutely necessary to prevent local governments from investing in private corporations. One of the most common forms of taxless finance was for governments to issue bonds, turn the bonds over to the private company to purchase stock, and require the private company to service the bonds, thus eliminating the need to raise current taxes. This type of arrangement had been used by the national government to finance the First and Second Banks of the United States and the Union Pacific Railroad. It had been used by Florida, Mississippi, Louisiana, and Arkansas to finance banks. A procedural debt restriction would not, by itself, prevent voters from approving a bond issue to invest in a private corporation that would service these bonds! It was well understood by the 1870s that such taxless finance arrangements were an invitation to trouble.

Not surprisingly, state constitutions began stipulating that no local governments could invest in private corporations. Almost all of the states with "local

provisions" in Table 11.8 prohibited local governments from investing in private corporations.[36] Constitutions also began making it clear that state and local governments were not responsible for the debts of special governments, special districts, or public authorities.[37] This was the second round of constitutional prohibition of taxless finance. The constraints on local government borrowing and investment produced a growing number of special local governments. The Tieboutization of local government was well underway.

X. BACK TO LOCAL GOVERNMENTS: LIMITING LIABILITY FOR SPECIAL-DISTRICT DEBT IN THE THIRD CYCLE

Anyone who has attended a school board meeting to establish boundaries or a county council meeting to site a road learns that no local governments are so small that they contain a homogenous population within their jurisdictions. Nonetheless, relative to larger governments, local governments tend to be small enough, homogenous enough, or flexible enough in creating their boundaries that they are able to finance a considerable amount of infrastructure even when required to gain majority approval for bond referenda. Local governments also have been endowed by the various debt rules that govern them with a credible ability to raise funds through private capital markets. It may seem backward, but stringent debt restrictions – particularly debt restrictions that prohibit special-purpose governments from gaining access to general government revenues – improve governments' ability to promote infrastructure investment and raise money in capital markets. To get to those issues, we first need to address the circumstances under which fragmented government is a good thing.

Suppose that a good infrastructure project (one that yields more in benefits than it costs) brings positive net benefits to 20 percent of the citizens in a state. Further suppose that location of the benefited citizens is not coincident with a local government – that the benefits are spread across existing local jurisdictions. Further suppose that there are no externalities from the project. The state cannot build the project because of the majority-rule provisions: The project only benefits 20 percent of the voters. No local jurisdiction covers the citizens who benefit. So a government structure with fixed states and local governments cannot build this project. If, however, a group of citizens can form a special district, then they can create a jurisdiction with majority support to

[36] The census of 1880 section on "constitutional provisions relating to state and local debts" opens with a table of state restrictions on "the power of state and minor political divisions to lend their credit to or in aid of corporations, etc., or to become stockholders in any corporations." *See* Census Office, *supra* note 7, at 649.

[37] Quirk and Wein have a great discussion of how this debate played out in the New York Constitutional convention of 1938, where the protagonist wanting to prevent the constitution from prohibiting state or local governments from assuming the debts of public authorities was Robert Moses. *See* Quirk and Wein, *supra* note 32.

generate the taxes and financing necessary to build the project. Put simply, the system of flexible, special districts helps provide a greater variety of public goods and services.

Several problems arise with implementing a scheme of infrastructure investment carried out by special districts. First, who gets to be a government? Second, who gets to draw the boundaries? Third, how does the state ensure that the taxes will be levied, the project will be built, and the debt will be repaid? All these problems fall under the general rubric of "transparency," that is, knowing what the government is doing, and clearly there are lots of transaction costs in implementing such a scheme.

The initial restrictions placed on local governments in the 1870s were intended to eliminate taxless finance. In addition to forbidding local governments from investing in private corporations, state constitutions required bond referenda and higher taxes for any new debt issue. Some states also instituted debt limits for local governments. Local governments, however, were able to maneuver within these restrictions. Because local governments were not bound by state requirements to levy general property taxes, they could levy special assessments on improvements approved by micro-electorates.[38] From special assessments, it was a small step to special taxing districts. By 1884, New York allowed cities to issue bonds in anticipation of revenues without violating their local debt ceilings. By the 1890s, public authorities were beginning to appear, special-purpose governments with the power to issue debt payable out of special revenues, such as port fees or bridge tolls.

Taxless finance arose in this environment in a new guise. Remember that taxless finance usually involved the taxpayers assuming a contingent liability if the project failed. If a public purpose, pursued by a public authority, financed by bonds to be repaid from user fees or special assessments, who was ultimately responsible for the debt? Were state or local governments expected to assume either a direct or a moral obligation to repay debt if the public authority they created went bankrupt? Where was the contingent obligation? Were special districts just another version of the taxless, but contingent, finance of the 1830s?

What appears to have happened in most states is the creation of constitutional bright lines about debt liabilities. In the 1938 New York constitutional convention, a debate arose over this issue. The public authorities, led by the legendary Robert Moses of the Triborough Bridge Authority, battled with reformers at the convention who wished to make it constitutionally clear that neither the state nor any local government was liable for the debts of a public authority.[39] The result of the constitutional convention, adopted by the voters, made it very

[38] *See* Robin Einhorn, Property Rules (1991) for a detailed history of how Chicago financed street and sewer improvements by using special assessments street by street. Water supply, however, required a citywide program, and so faced a much higher bar.

[39] Quirk and Wein, *supra* note 32, at 552–579. The debate concerned the amendments proposed by Abbot Law Moffat and Philip Halpern. *Ibid.*

clear that public authorities were solely liable for their bonds. In other words, special-purpose governments in New York could not create liabilities for either the state or local governments. In order to have a hope of receiving an adequate return, prospective bondholders had substantial incentives to make sure that the public authority was a sound investment on its own terms.

These provisions added a constitutional twist, since they did not prohibit taxless finance. The state and local governments of New York already had shown too much ingenuity in evading the attempts of previous constitution writers to believe that taxless finance could be completely banned. Instead, the provisions adopted by New York in 1938 provided credible and effective attempts to ensure that taxless finance indeed would be taxless for the state. By eliminating the contingent obligation of the general taxpayers to stand liable for special-purpose government debts, these new provisions greatly reduced the common-pool problems associated with financing projects. Making taxpayers of the special jurisdiction solely liable for the project provided taxpayers, political officials, and bondholders with stronger incentives to evaluate proposed projects. No doubt these provisions could be abused, and they certainly have been, but the provisions marked another stage in the long battle in reducing the perils of taxless finance.

The new set of institutions helped align the interests of political officials with those of their citizens. In many respects, the mature system, arrived at the end of three cycles of action, problems, and new constitutional rules, comes close to being optimal. The formation of special governments combines with the insistence that these governments alone are responsible for their debt to produce good incentives for political officials, citizens, and the bondholders. In particular, limits on the responsibility of debt eliminate a series of incentive and common-pool problems.

XI. CONCLUSIONS

The United States has some of the best infrastructure in the world, much of it provided by state and local governments, most of it financed by government borrowing, and a long history of fiscal probity. Despite those facts, American voters and scholars still worry that state and local governments fail to play by the rules they themselves establish. We have outlined a history illuminating the dynamic relationship among debt finance of infrastructure, the constitutional rules governing borrowing at the state and local level, and the structure of state and local governments.

During America's first 150 years, state and local governments went through three cycles of financing projects, debt problems, and new constitutional rules: 1790 to 1850, 1850 to 1880, and 1880 to 1933. States were the primary builders of infrastructure from 1790 to 1850. After states ran into financial distress during the debt crisis of 1841, they enacted new constitutional rules that made it more

difficult for states to finance new infrastructure, particularly infrastructure that was geographically specific. The requirement for statewide majority approval effectively prohibited state financing of a wide range of valuable projects whose effects were local.

Per our substitution hypothesis, a major response to these state-level procedural restrictions was to move government borrowing for infrastructure to the local level. A second cycle of defaults in the 1870s, this time at the local level, led to stricter restrictions on local borrowing. In the third cycle, per our governmental jurisdiction hypothesis, those restrictions led to creative responses in the form of special districts and public authorities in the early 20th century. The development of those special purpose governments led to more strict enforcement of taxless finance.

We have drawn on SGFF models to study aspects of the demand, supply, and finance of infrastructure projects. Our main result is the importance of aligning the set of taxpayers and beneficiaries of the projects. By the mid-20th century, state, local, and special governments served an important and powerful role in providing infrastructure. The flexibility of this form of government allowed special districts to align the project's beneficiaries and the taxpayers who must finance it. A pivotal institutional feature of these governments is that they alone, and not a general government, are responsible for their debts.

Special district responsibility for debt has two related incentive effects. First, when a general government is liable, taxpayers will agree to finance projects that benefit themselves but which do not create a new social surplus. The reason is that taxpayers are not fully liable for the costs of the project, some of which will be borne by the taxpayers of the general government. Second, when the general government backs this debt, bondholders are much less concerned about the project's success – as long as they believe the general government is sound, they don't have to worry. Strict liability for special-district debt, therefore, forces both taxpayers and bond markets to scrutinize projects more carefully and to choose only positive surplus projects – only these have a hope of attaining financing.[40] Briffault emphasizes the second source of incentives: One result of the mature system governing state and local borrowing is that "The real discipline for the state thus comes from capital markets."[41] But it is not these incentives alone that matter. The bond market induces important effects on those who design special districts and the associated projects.

Our approach suggests that the fiscal institutions governing debt and infrastructure provision in mid-20th-century America were good ones in the sense that they limit the ability of citizens from undertaking projects that fail to create

[40] Not all special districts are solely liable for their debts, but many are, particularly those providing infrastructure. For an overview of special districts, *see* Nancy Burns, The Formation of American Local Governments: Private Values in Public Institutions (1994).

[41] Briffault, *supra* note 1, at 61.

a positive social surplus. Infrastructure finance around the world has trouble doing exactly this, as the American financial problems in the 19th century and the more recent problems in Argentina and Brazil reveal.

The evolution of constitutional rules produced a very fragmented form of government in the United States. Fragmentation, of course, has both good and bad features. Since 1942, the vast majority of government units created in the United States have been special districts (Table 11.1). Moreover, America has some of the best infrastructure in the world. Not all public infrastructure is provided by special purpose governments by any means; traditional local governments still provide most of it. But the system seems to work well in several dimensions; this chapter has tried to explain why.

Questions for Chapter 11

1. In this chapter, Wallis and Weingast reveal an interesting connection between the choice of infrastructure financing strategy and governmental form. It is a connection that is not likely to be on the minds of either voters or administrators when such decisions are proposed. One consequence is a proliferation of special districts. These governmental forms have, by design, a single service and geographically based focus. What are the implications of an increase in special district governments for effective state fiscal policy? The authors highlight the benefit of better alignment of service benefits and funding, but significant disadvantages are associated with this trend. How should we address the implications of spillover effects in certain types of infrastructure projects? What about coordination costs across governments? Finally, is it more difficult to stop providing services that have been funded via special districts (see Graddy and Ye)?[42] Although the nature of the trade-off between the benefits and costs of special districts will vary by the service or projects being financed, what are the implications of these concerns for the overall efficiency and effectiveness of state fiscal decision making and policy implementation?

2. Wallis and Weingast analyze the popularity of the increased role of the private sector in infrastructure financing decisions. Although often touted as a consequence of the new public-management movement of the past two decades, these authors reveal a long history within the United States of private financing of public infrastructure projects. What they call "taxless finance" offers considerable appeal to voters, who may not fully understand their contingent liability for these projects. Their discussion raises concerns about the potential inefficiencies associated with this public finance strategy, including the deficiencies in its risk structure. However, as state and local governments continue to face cycles of fiscal instability (see Chapter 12 by David Super), we can expect the

[42] Elizabeth Graddy and Ke Ye, *When do we "Just Say No"? Policy Termination Decisions in Local Hospital Services* (USC School of Policy, Planning, and Development Working Paper, 2007).

use of this financing strategy to increase. How can we structure these strategies to reduce the likelihood of inefficiency? Better information provision to voters, transparency in project development, and development of risk-sharing structures across both public and private parties to these arrangements may be worth further exploration.

3. The chapter, and indeed the essays in the book as a whole, focuses on the United States. Would international comparisons, both with developed and developing countries, give us a better handle on how well American institutions function? Have similar rules and institutions regarding debt finance developed elsewhere? What were their consequences in other countries?

4. In the 20th century, a wide array of fiscal devices developed to constrain the way governments behave: balanced-budget rules, line-item vetoes, tax limitations, and rainy-day funds, for example. How do these other fiscal institutions interact with debt provisions? Are states with looser procedural debt restrictions more or less likely to adopt other fiscal constraints? Are states with higher debt levels more, or less, likely to adopt other fiscal mechanisms to limit taxes and expenditures?