



Toward A Second-Generation Theory of Fiscal Federalism

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Abstract

Drawing on a wide range of literature and ideas, a new “second-generation theory of fiscal federalism” is emerging that provides new insights into the structure and working of federal systems. After a restatement and review of the first-generation theory, this paper surveys this new body of work and offers some thoughts on the ways in which it is extending our understanding of fiscal federalism and on its implications for the design of fiscal institutions.

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Contrasting forces, some leading to increased fiscal centralization and some to greater decentralization, are producing an ongoing restructuring of public sectors throughout the world. In many industrialized and developing countries, major programs have been introduced to shift decision-making from the center to provincial and local governments. In the developing nations, such restructuring has been, in part, a response to the failure of centralized planning to bring the sustained growth that was one of its major objectives. Likewise in the industrialized world, the appeal of fashioning policies in response to more localized preferences and circumstances has led to the establishment of Welsh and Scottish Assemblies in the U.K., a shift of powers to regional governments in Spain, and many other cases of decentralization of the public sector. At the same time, we are witnessing a process of centralization in Europe: the creation and evolution of a new top level of government, the European Union, in the context of European monetary integration. Just what the ultimate range of authority and responsibilities of the new central level of government will be is as yet unclear. But these contrasting forces in Europe raise the intriguing question of the future of the national governments of the member states (Inman and Rubinfeld, 1992).

In the context of the evolution of the public sector, scholars have likewise been active in extending and enriching our understanding at a conceptual level of the structure and working of multi-level government—so-called “fiscal federalism” in the economics literature. Their efforts are aimed at producing what Qian and Weingast (1997) and others call a “second-generation theory of fiscal federalism.” This body of work draws on several strands of literature, much of it outside the field of public economics: principal-agent problems, the

economics of information, the new theory of the firm, organization theory, and the theory of contracts. In addition, research in the field of public choice has broadened our perspectives on fiscal federalism.

My purpose in this paper is to explore this wide-ranging literature in fiscal federalism and to see what kinds of new insights are emerging. To speak of a “second-generation theory,” however, implies the existence of a first-generation theory of fiscal federalism (FGT). And I think it is important, as a backdrop for this exercise, to set out carefully just what this first-generation theory was (or is). Thus, I devote the first section of the paper to presenting what, in my view, was the basic theoretical structure of fiscal federalism as it emerged some thirty to forty years ago. I have, in fact, found it both interesting and useful to think back to the basic analytical framework in public economics that underlay the early treatments of fiscal federalism in order to put the first-generation theory in the context of the field (and economics) in general.

With a statement of the earlier view of fiscal federalism in place, the paper proceeds in later sections to explore the emerging second-generation theory. In addition to understanding the new perspectives on centralization and decentralization, a major objective is to draw out implications for the structure of the public sector, fiscal institutions, and policy-making. How, in short, has the new literature changed the way we think about the vertical structure of government and the form and working of fiscal institutions?

1. On the First-Generation Theory of Fiscal Federalism

What I will call the “mainline” theory of fiscal federalism was solidly embedded in the view of public finance that prevailed in the 1950’s and 1960’s. Three major figures played a key role in defining this perspective on the public sector: Kenneth Arrow, Richard Musgrave, and Paul Samuelson. In particular, Samuelson’s famous two papers (1954, 1955) on the nature of public goods, Arrow’s conceptualization (e.g., 1970) of the roles of the private and public sectors, and Musgrave’s monumental volume (1959) on public finance set forth an active and positive role for the government sector in terms of correcting various forms of market failure, establishing an equitable distribution of income, and stabilizing the macro-economy at high levels of employment with stable prices (in a basically Keynesian framework). A key element in this perspective was a largely implicit view of the workings of the public sector. Where the private market system “failed” because of various sorts of public-goods problems, the government should (and presumably *would*) step in and introduce appropriate policy measures to correct the failures. The public economist’s job was largely to diagnose the source of the ills, prescribe the appropriate remedy, and then leave public officials to fill the prescription. The implicit assumption was that government agencies, as “custodians of the public interest,” would seek to maximize social welfare, either because of some kind of benevolence or, perhaps more realistically, because of electoral pressures in a democratic system. Incumbents who didn’t do their job could expect to be replaced as a result of voters’ decisions at the polls. In short, where market failure prevailed, there was a presumed need for public intervention. Finally, I simply note the implicit assumption of the political stability of a sustainable nation-state that provides the context for the analysis (an issue to which

I shall return in the concluding section of the paper). Let me refer, with some risk of oversimplification, to this view of public economics as the Arrow-Musgrave-Samuelson (AMS) perspective.¹

In a multi-level government setting, the AMS perspective translated into the presumption that each level of government would seek to maximize the social welfare of its respective constituency. Thus, a local government, for example, would be expected to promote the interests of those within its limited jurisdiction. In a setting with public goods whose pattern of consumption is less than national in scope, decentralized finance offers some potentially important opportunities for gains in social welfare. For such “local public goods,” local governments can provide levels of public outputs that meet the demands of the residents of their respective jurisdictions. Such an outcome with local outputs tailored to the demands (and particular conditions) of each jurisdiction will clearly provide a higher level of social welfare than one in which a central government provides a single, uniform level of public output in all jurisdictions. I formalized this rather obvious proposition as the “Decentralization Theorem” in my book in 1972. (More on this shortly.)

The FGT thus envisioned a setting in which governments at different levels provided efficient levels of outputs of public goods for those goods whose spatial patterns of benefits were encompassed by the geographical scope of their jurisdictions. Such an outcome was called a “perfect mapping” (or “fiscal equivalence” to use Mancur Olson’s (1969) terminology). But since there are a number of “local public goods” with varying geographical patterns of consumption, it was recognized that there could hardly exist a level of government whose jurisdiction coincided perfectly with the pattern of geographical benefits for every local public good. In particular, outputs of some local public goods (such as roads and clean rivers) can produce interjurisdictional spillover benefits: they provide benefits for residents of other jurisdictions. Nonetheless, there might still be welfare gains from allowing decentralized provision relative to a uniform, centrally determined level of public outputs. The FGT dealt with this issue by a simple application of the traditional Pigouvian theory of subsidies: the central government should provide unit subsidies (i.e., matching grants) to decentralized governments that would internalize the benefits. Recipient governments, in the pursuit of local welfare maximization, would then extend the outputs of such local public goods to the point where marginal social benefits for society as a whole equal marginal cost.²

The literature went on to recognize the constraints that exist on both redistributive and macroeconomic stabilization policies at decentralized levels of government. Without access to monetary prerogatives and with highly open local economies, decentralized governments have only a very limited capacity to influence local levels of employment and prices. Thus, the primary responsibility for Musgrave’s macroeconomic stabilization function must rest with the central government. Likewise, the mobility of households and firms limits the redistributive potential of decentralized governments. An aggressive local government program, for example, to redistribute income from rich to poor establishes undesired incentives for outmigration of the well-to-do and immigration of low-income households. Thus, the FGT envisioned a major role for the central government in establishing an equitable distribution of income and maintaining the economy at high levels of employment with price stability.

There is clearly some modest scope for decentralized government to play a supporting role in redistributive and macroeconomic policy, but the primary responsibility according to the FGT rests with central government. In short, the FGT produced a vision of fiscal federalism in which the central government took the lead in macroeconomic stabilization policy, introduced basic measures for income redistribution, and provided efficient levels of output of national public goods.

Decentralized levels of government found their primary role in the provision of efficient levels of “local” public goods—that is, public goods whose consumption was limited primarily to their own constituencies. Where spillover benefits across jurisdictions accompanied outputs of local public goods, appropriate unit subsidies would encourage decentralized authorities to extend outputs to efficient levels. I note especially that the focus of the analysis was on the *assignment of functions* to the different levels of government. With a proper assignment and the needed fiscal tools at their disposal, public agents at the various levels could be expected to pursue welfare-maximizing policies.

The FGT also devoted some attention to taxation in a federal system. The issue became known as the “tax-assignment problem,” the question of what forms of taxation are best employed at the different levels of government.³ A basic concern in this literature is the distortions that can result from the decentralized taxation of highly mobile tax bases (especially capital). A key point is that the extensive application of non-benefit taxes on mobile factors at decentralized levels of government can result in distortions in the location and levels of economic activity (Gordon, 1983; Inman and Rubinfeld, 1996). The view that emerges from this perspective is that decentralized levels of government (especially local governments) should place a primary reliance on benefit taxes (e.g., property taxes and user fees); indeed, in the Tiebout model, taxes are seen as the “price” that households pay for their consumption of local public goods. The central (and, to some extent, other higher levels of government like provinces or states) have greater scope for the use of things like progressive income taxes as part of a broader program for the redistribution of income. But more decentralized levels of government are better advised to rely on taxes, like the property tax, which under certain conditions, function as benefit taxes.⁴ In fact, it is straightforward to show that economic efficiency generally *requires* the benefit taxation of mobile economic units (Oates and Schwab, 1988, 1991; Oates, 1996). Taxes equal to the marginal cost of providing local services are needed to induce *both* households and firms to choose jurisdictions that provide the mobile agent with an efficient level of these services.

Finally, the FGT addressed the issue of equalizing, lump-sum grants from the central government to regional (or local) governments.⁵ Such grants were justified on both equity and efficiency grounds. They were needed to correct distorted migration patterns (Flatters, Henderson and Mieszkowski, 1974) and also to provide desired assistance to poorer jurisdictions. Indeed, such equalizing grants have been (and are) a prominent feature of many systems of federal finance.

This is an admittedly quite terse and somewhat oversimplified view of the FGT. But it does, I believe, convey the basic vision of the early normative theory of fiscal federalism. However, there are some elements of this view that need further examination. First, let me return to the so-called Decentralization Theorem. This is the seemingly straightforward proposition that under certain prescribed (sufficient) conditions, a varied pattern of local

outputs in accordance with local tastes will be Pareto superior to an outcome characterized by a centrally determined, uniform level of output across all jurisdictions. The proposition itself is trivially obvious, but what goes into it is less so. In particular, the theorem presumes that the alternative to local provision is a centrally determined, uniform level of public outputs. This is a strong, and not-so-obvious, assumption. Indeed, with perfect information, one could envision an outcome in which the central government, through its own agents, established the Pareto-efficient levels of output of local public goods in each jurisdiction. What prevents such an outcome? The literature, both in economics and political science, has historically advanced two kinds of arguments against this outcome. The first is essentially an information issue. Local governments, so the argument goes, are closer to their constituencies; they have a superior knowledge of the preferences or demands of local residents and of other local conditions (e.g., cost functions). It is difficult for a central authority to determine the particular preferences of the residents in the myriad of decentralized jurisdictions that make up the nation as a whole. Thus, there exists an asymmetry of information: local governments know the preferences of their own residents and other local circumstances, but the central government does not.

A second kind of argument has also been used to justify the assumption of a uniform level of output under centralized provision. And it is more political in character. This argument suggests that there are political constraints on the central government that typically prevent it from providing more generous outputs in one jurisdiction than in another. There is some sense of equal treatment on a national scale that makes it hard for the central government to vary levels of public outputs across jurisdictions. There is thus a kind of political constraint that prevents the central government from establishing a Pareto-efficient pattern of outputs across different areas.

These two arguments appear in various garb through a wide body of literature that reaches over an extended period of time and beyond the confines of economics. In his insightful chapter on “The Federal Constitution,” Alexis de Tocqueville, describing and analyzing the U.S. system in the 1830’s, asserts that “The federal system was created with the intention of combining the different advantages which result from the magnitude and the littleness of nations. . . .” He goes on to elaborate on the advantages of “littleness” by pointing out that “In great centralized nations the legislator is obliged to give a character of uniformity to the laws, which does not always suit the diversity of customs and of districts; as he takes no cognizance of special cases, he can only proceed upon general principles . . . since legislation cannot adapt itself to the exigencies and the customs of the population, which is a great cause of trouble and misery” (Vol. I, p.163). One might read this historic passage as placing primary emphasis on the political constraints on centralized provision, although this may reflect incomplete knowledge as well.

In fact, however, central government programs often result in varying levels of certain public outputs across local jurisdictions.⁶ Indeed, this is frequently the result of “pork-barrel politics.” In two recent and insightful papers, Lockwood (2002) and Besley and Coate (2003) construct models of representative government in which central legislation purposefully discriminates among different regions. I will return to this matter later, but for now I simply want to make explicit the ingredients of the Decentralization Theorem—the assumptions and their rationale.

A second issue that requires comment is the Tiebout model, which has played a major role in the literature in local public finance, but which I have hardly mentioned in my thumbnail sketch of the theory of fiscal federalism. In 1956, Charles Tiebout published his famous paper, describing a model of mobile households that select a community of residence based on their preferences for local public goods. The basic intent of the paper was to challenge Samuelson's claim that decentralized choice could not result in an efficient provision of public goods; Tiebout showed that there exists a class of such goods, namely "local public goods," for which a mechanism exists under which individual choice results in a Pareto-efficient outcome. People effectively sort themselves into groups that are homogeneous in their demands for local services.⁷ Some observers (e.g., Cremer, Estache and Seabright, 1996) have suggested that the Tiebout model is virtually the centerpiece of the theory of fiscal federalism. But this, I think, exaggerates somewhat its role. Even were there *no* mobility of households whatsoever, the FGT that I have laid out above would still hold. Even with immobile individuals, we might still expect there to exist systematic differences in tastes across jurisdictions that would constitute a rationale for the decentralized provision of local public goods. From this perspective, the role of Tiebout sorting is to increase the welfare gains from decentralized finance. The more homogeneous in their demands for local services are local jurisdictions and the greater the variation in these demands across jurisdictions, the larger are the potential welfare gains from decentralized finance. Thus, the Tiebout model strengthens the case for the decentralized provision of relevant services, but it is (in my view anyway) only part of the story.⁸

Finally, I want to address a third issue: hard budget constraints. The recent literature in fiscal federalism has (quite rightly) placed a heavy emphasis on the importance of reliance on *own* sources of revenues for the finance of decentralized budgets. Weingast (1995) and McKinnon (1997), for example, have stressed the dangers inherent in a system where decentralized levels of government rely too heavily on intergovernmental transfers or on debt issues for financing their budgets. In a setting where the fiscal system provides a ready "bailout" for provincial or local governments, there are virtually irresistible incentives for decentralized governments effectively to raid "the commons" and extend public programs well beyond efficient levels (e.g., Goodspeed, 2002). In the extreme, as we have seen in countries like Argentina, perversely structured systems of intergovernmental finance can destabilize the public sector and the economy as a whole. I simply want to note here that the basic point (if not the terminology) is surely present in the FGT. In the literature on the tax-assignment problem, there is an explicit recognition of the role that local taxation must play in establishing a proper environment for budgetary decision-making. For example, in his early and seminal treatment of tax-exporting, McLure (1967) pointed out that where jurisdictions have the capacity to export part of their local tax burdens onto residents of other jurisdictions, there will exist incentives to expand the local budget beyond efficient levels, as the local "tax-price" will effectively be too low. The importance of confronting public decision-makers with the correct prices for public goods has long been an important theme in public economics. It is certainly the case, however, that the more recent literature has expanded and enriched our understanding of the character and role of hard budget constraints (as I will discuss shortly).

2. Public-Choice Perspectives on Fiscal Federalism

The preceding section, with its treatment of what I have called the “mainline,” FGT of fiscal federalism, has ignored the important contributions coming from the field of public choice, a field that emerged and challenged the AMS view of the public sector in the 1950’s. A central tenet of the public-choice approach is the view that public decision-makers are utility maximizers with their own objective functions. And this has produced, in certain instances, a rather different view of the normative properties of fiscal decentralization.

One prominent theme in this literature has its source in the Niskanen contention that public agents can be usefully characterized as seeking to maximize the size of their budgets. Budget maximization is taken here to serve as a proxy for a variety of objectives including enhancement of power and influence, large staffs, and higher salaries. Brennan and Buchanan (1980) extended this view to the proposition that the public sector can itself be envisioned as a monolithic agent, a “Leviathan,” that seeks its own aggrandizement through maximizing the revenues that it extracts from the economy. What is relevant here is the implication of the Leviathan view for fiscal federalism. Brennan and Buchanan see fiscal decentralization as a mechanism for constraining the expansionary tendencies of government. Competition among decentralized governments, much like competition in the private sector, can limit the capacities of a monopolist, in this case a monopolistic central government, to increase its control over the economy’s resources. In their view, competition among governments in the context of a decentralized fiscal system with mobile households and firms “can offer partial or possibly complete substitutes for explicit fiscal constraints on the taxing power” (1980, p. 184). The Brennan-Buchanan approach thus offers a very different view of the role of decentralization in the fiscal system.

The favorable normative implications of the Leviathan view of fiscal competition contrast sharply with some later treatments of this issue. There is now a large literature that contends that active fiscal competition among jurisdictions can itself result in distorted levels and patterns of economic activity.⁹ This topic is currently of major importance in light of the ongoing economic and political integration of Europe with numerous proposals for the harmonization of member-country fiscal and regulatory policies. Ongoing theoretical and empirical work is providing an illuminating range of insights into both the efficiency-enhancing and distorting effects of such competition. I will return to the issue of fiscal competition in a somewhat expanded context in the concluding section.

But two further comments are in order. First, as to the Leviathan view of the role of fiscal decentralization, the early evidence was at best mixed; my own work found little support for the proposition that fiscal decentralization provided an effective constraint on the growth of government (Oates, 1985, 1989). But more recent work has provided some important clarification on this matter. In particular, Rodden (2003) and others, developing a central theme in the SGT and in this paper, point out that it is not fiscal decentralization *per se* that matters, but *what form it takes*. Rodden finds that, where decentralization involves reliance on own taxation at provincial and local levels, it is indeed associated with smaller government. But where decentralized government is financed primarily with transfers from above, the opportunities for “raiding the fiscal commons” can result in perverse programs

that actually increase the size of the overall public budget. More on this fundamental issue shortly.

Second, my focus here on the Leviathan issue should not obscure the much broader range of contributions of the public-choice literature (the political-economy approach) to fiscal federalism. This literature has provided an invaluable focus on the structure of fiscal institutions and the incentives they create for public decision-makers.

3. On the Emerging Second-Generation Theory (SGT) of Fiscal Federalism

The “new” literature on fiscal federalism is wide ranging both in terms of its sources and directions. It reaches not only across fields in economics but across disciplines with important contributions from political scientists and others. This makes it difficult to characterize in a simple and systematic way, but let me try. The SGT draws heavily on two basic sources:

- (1) Work in public choice and political economy that focuses on political processes and the behavior of political agents. Unlike the FGT which largely assumed that public officials seek the common good, this work takes as its point of departure the assumption that participants in political processes (*both* voters and officials) have their own objective functions that they seek to maximize in a political setting that provides the constraints on their behavior. Officials don’t simply act on behalf of the welfare of their constituents. This body of work thus involves modeling of political institutions with explicit attention to the incentives they embody.¹⁰ Inman and Rubinfeld (1997a) have characterized the FGT as “economic federalism,” which they contrast with more recent models that explicitly account for political processes and their impact on outcomes.
- (2) The expansive literature on problems of information. The outcomes from collective-choice institutions depend in fundamental ways on the information that the various agents possess. In particular, in settings of asymmetric information, where some participants have knowledge of such things as preferences, cost functions, or effort, knowledge that is not available to other participants, the literature has shown us that optimal “procedures” or institutions are likely to be quite different from those in a setting of perfect information. The SGT is thus drawing heavily on much of the work in industrial organization and microeconomic theory that has explored these information issues.¹¹

What emerges from these two sources is a new literature on fiscal federalism that examines the workings of different political and fiscal institutions in a setting of imperfect information and control with a basic focus on the incentives that these institutions embody and the resulting behavior they induce from utility-maximizing participants. In this setting, the basic issue of whether to centralize or decentralize certain public activities appears in a somewhat (but not altogether) different light. Under the FGT, the tradeoffs involved in this decision were, on the one hand, the inefficiencies under centralized provision of public services stemming from more uniform outputs that fail to reflect divergences in local tastes and conditions versus, on the other hand, inefficiencies in local provision resulting from the failure to internalize interjurisdictional externalities. Where spillover effects across local jurisdictions are relatively small and where the variation in efficient levels of local

outputs is relatively large, the case for decentralized provision is obviously stronger (and vice-versa).

3.1. On the Tradeoff Between Centralization and Decentralization in SGT Models

In the wide range of models encompassing the SGT, the centralization versus decentralization tradeoff takes a variety of different forms. In several SGT models (e.g., Seabright, 1996), we find a tradeoff in terms of local “accountability” (sensitivity of outcomes to local preferences) versus a coordination of policies under centralization that serves to internalize interjurisdictional interdependencies. In two important papers, Lockwood (2002) and Besley and Coate (2003) provide frameworks in which the centralized outcome is a vector of local outputs determined by a central legislature composed of locally elected representatives. These papers thus explicitly depart from the earlier assumption under the Decentralization Theorem of uniform levels of output under a centralized regime. Depending on how the central legislature functions, the centrally determined outcome exhibits various sorts of misallocations. These inefficiencies must be weighed against the losses under a decentralized outcome where localities ignore the spillovers associated with their decisions. It is interesting that although the models under the SGT umbrella differ in fundamental ways from the FGT, many of them produce a tradeoff between centralization and decentralization that is in a somewhat similar spirit to their earlier counterparts. As Besley and Coate (2003) point out, “All of this notwithstanding, the key insight remains that heterogeneity and spillovers are correctly at the heart of the debate about the gains from centralization” (p. 2628). But this tradeoff can be seen in intriguing new ways.¹²

Let me offer a few preliminary observations. Some of the work in the SGT spirit flows from a direct application of industrial-organization models to a public-sector setting. For example, one of the basic, workhorse models in the I-O literature is the standard principal-agent model. Here, in a setting of asymmetric information with imperfect monitoring, the principal seeks to provide an incentive that will induce the agent to respond with a level of the relevant activity (or effort) that maximizes the utility of each party in a context where outcomes have a stochastic component. The solution takes the form of a contract based on observed behavior (or output). In an I-O setting, the model has been employed to study the organization of the firm, where the owner or manager is typically treated as the principal and the worker as the agent. It is not immediately clear how this framework translates into an electoral setting with multiple levels of government (Wildasin, 2004). In such a public-sector context, who exactly is the “principal” and who are the “agents”?

The SGT literature has handled this issue in two quite different ways. The first approach is essentially to ignore the electoral dimension of public sector structure and to treat the vertical structure of the public sector much like that of the firm. The central government in this formulation, acting as the principal, seeks to structure intergovernmental fiscal relations in such a way as to get regional or local governments, the agents in the problem, to behave in ways that promote the objectives of central officials in a setting where the center has only imperfect information and control over the fiscal activities of decentralized public agents. In one such application, Levaggi (2002) makes use of a principal-agent approach to show that,

under certain conditions, a central government, rather than providing a lump-sum budget to local governments, may do better by limiting the flexibility of local government service provision through the use of a “double budget constraint” which prescribes not only the overall budget but also the precise distribution of the expenditure of the funds on specified functions (or programs).

This particular approach to applying the principal-agent model to fiscal federalism is limited in its application. It basically describes a setting that Inman (2003) and others call “administrative federalism,” where regional or local governments are largely agencies that respond to central directives. There are surely cases where such an application makes sense, but much of the electoral and fiscal autonomy that we usually associate with decentralized finance under a federal system seems outside the scope of this kind of model.¹³ What is needed is a merging of the political economy and principle-agent approaches (to which we turn now).

A second approach that explicitly accounts for the fiscal autonomy of different levels of government in the context of electoral processes adopts a different definition of principals and agents. In this framework, the electorate itself is taken to be the principal(s) and elected officials to be the agents. To take one example, Tommasi (2003) has recently formulated a model in which the principal is not a single individual, but rather the electorate as a whole. He employs a variant of the “common-agency” model to capture the problem of the control of public officials by the citizens themselves. In this framework, a centralized system takes the form of a single agent (elected public official) who serves the whole population, while decentralization consists of one agent in each jurisdiction. The problem then becomes the design of the “optimal contract” involving a reward scheme to the agent (public official). The analysis leads to an interesting comparison of outcomes under the alternative regimes in which we find that the case for centralization becomes stronger the larger are the externalities associated with local public outputs. This, of course, is similar in spirit to the FGT. But what is new here is the finding that decentralization may be preferable even in cases of perfect homogeneity of preferences across local jurisdictions. The case for fiscal decentralization depends not only on differences in tastes, but on the potential for better local control or “accountability” under decentralized provision.¹⁴

In a similar vein, Seabright (1996) provides a framework in which elections are viewed as “incomplete contracts” in that certain relevant information is “unverifiable.” In such a setting, “. . . it may matter very much who has the power to take action. . .” (pp. 64 and 5). Centralization allows a greater coordination of policies (i.e., the internalization of interjurisdictional externalities), but decentralized decision-making promotes accountability. Seabright gives accountability a precise meaning: the probability that the welfare of a given jurisdiction determines the election of the government. The choice between centralization and decentralization thus depends on the relative importance of interjurisdictional spillover effects versus the losses from reduced accountability under central control. As in the Tommasi model, decentralization may be the preferred structure even if there are homogeneous tastes across localities, inasmuch as it enhances local control.

While these models offer an enriched perspective on the choice between centralization and decentralization, they often have little to say about the structure of fiscal institutions.

The Seabright model, to take one example, poses the tradeoff between coordination and local accountability. But it doesn't shed much light on the precise form of intergovernmental fiscal relations (such as intergovernmental grants). In fact, the absence of such institutional content may make the analysis a little misleading. Recall that a basic normative element in the FGT is the use by the central government of matching grants to internalize the spillover effects of local public outputs. If such grants are introduced into the Seabright and similar models, it would seem, in principle, that the gains from coordination *and* the gains from accountability can be realized simultaneously under a relatively decentralized structure. The tradeoff effectively disappears.

In this particular context, let me return briefly to the issue of imperfect information. Information asymmetries, as I noted earlier, have long been cited as part of the case for fiscal decentralization. Local governments, being closer to their constituencies, are thought to possess knowledge of local preferences, cost functions, and other local circumstances that is not available to central authorities. There is the interesting question of why this would be so. As Cremer, Estache and Seabright (1996) suggest, information acquisition is endogenous—and there is no reason, in principle, why a central authority could not make use of a variety of channels to assemble needed information on local conditions. But such activities are not costless, and, as Cremer, Estache and Seabright (1996) observe, the failure of central authorities to obtain such information must reflect its lesser value to central, than to local, public agents.

On further reflection on these information issues, there are some quite strong assumptions made in the FGT, assumptions that don't seem fully consistent with one another. We assume that the central government knows the preferences of individuals for national public goods, but not for local public goods. This seems a strange dichotomy. One might justify it on the grounds that acquiring information on national public goods is worth the cost to central authorities, while (as noted above) the value of such information on local public goods is not worth its cost of acquisition. Alternatively and less formally, we might simply presume that central government information is imperfect for all public goods, but that central provision of truly national public goods is likely to produce a better outcome than one in which local jurisdictions ignore the benefits that their outputs confer on those in other jurisdictions. Pushing this point further, if central government has little knowledge of local preferences, how can it determine the correct level for Pigouvian subsidies for local outputs that generate interjurisdictional spillover benefits? The measurement of the spillover benefits themselves requires local information on the valuation of the benefits. Again, one might argue, I suppose, that the somewhat imperfect subsidies are likely to produce an outcome that is typically better than one in which the spillover benefits are ignored entirely. But there clearly are some basic information problems here.

Other parts of the emerging SGT literature provide some profound new insights into federal fiscal institutions. Some of this literature, in fact, calls into question the basic prescriptions of the FGT. Padovano (2004), for example, constructs a political-economy model in which decentralized redistribution programs are more efficient than central measures. In the Padovano model, central "politics" allows some regions to exploit others through inter-regional redistributive programs. The distortions associated with such inter-regional

programs can be avoided by making redistribution a regional function so that each region can draw only on its own resources for redistributive purposes.

3.2. *Fiscal Decentralization: The Problem of Soft Budget Constraints and Fiscal Bailouts*

The FGT has stressed the potential gains from fiscal decentralization resulting from a more diverse and efficient pattern of local public outputs. The public choice literature and some of the new literature (e.g., Weingast, 1995; Qian and Weingast, 1997) has buttressed the case for decentralization, seeing it as a mechanism for controlling the overly intrusive and expansive tendencies of the public sector and for supporting the effective operation of private markets.

But fiscal decentralization, as we have come to realize more recently, brings with it potential dangers (Prud'homme, 1995). In certain settings, it can provide a vehicle through which regional or local governments can exploit the "fiscal commons" by effectively shifting the burdens of local programs onto the nation as a whole. The FGT recognized this issue in a limited way; as noted earlier, the literature on tax-exporting (e.g., McLure, 1967), for example, exposed the tendencies for decentralized finance to be overly expansive in cases where the incidence of local taxation could be shifted onto residents of other jurisdictions. But the more recent literature provides a far richer and wide-ranging treatment of the political-economic character of fiscal "breakdowns" that can result from the perverse incentives that may exist under certain quite prevalent forms of intergovernmental fiscal institutions.

This treatment makes a basic distinction between so-called soft and hard budget constraints. The terminology has its source in the seminal work of Kornai (1979, 1980). Kornai employed the term "soft budget constraint" to describe the behavior of state-owned enterprises in socialist economies that could count on being bailed out by the state from chronic financial losses. But the term has since been much broadened to cover a wide range of cases where economic entities can expect their deficits to be covered by some form of "supporting organization" (Kornai, Maskin and Roland, 2003). Such entities can take the form of corporations, banks, nonprofit organizations, and even entire nations. For our purposes here, the term refers to regional or local governments who look to a higher level of government to rescue them from a condition of fiscal distress. For purposes of discussion, I shall simply refer to "local" governments turning to the "central" government for fiscal relief.¹⁵

In the presence of such soft budget constraints, local governments have a virtually irresistible incentive to expand their programs and spending beyond their means. It is important to understand the nature of this incentive. Although the central government may state its intentions to abstain from any sorts of bailouts, the real issue is the credibility of this claim. The issue is one of *expectations*. Can the central government credibly commit itself to avoiding fiscal rescue operations? If local governments believe the answer to this question is no, then they have strong reasons for pursuing deficit policies in the form of borrowing to finance large parts of their expenditures.

A natural way to model this phenomenon is in terms of a sequential game-theoretic framework (e.g., Goodspeed, 2002; Rodden, Eskeland and Litvack, 2003; Inman, 2003).

The central government makes a no-bailout claim. The local governments must assess the viability of this claim and then make their budgetary decisions. The game at this stage may take the form of a prisoner's dilemma (Inman, 2003). At any rate, under certain plausible circumstances, local decision makers may not find the central claim to be credible and thus proceed under the expectation that they will be rescued from their fiscal deficits. The final stage of the game involves the central government, which must then decide whether or not to bailout local public authorities. Again, under some reasonable conditions, the central government may decide that it is better to provide needed fiscal relief than to honor its previous commitment to abstain from bailouts.

It is important to understand that in such a framework, perverse fiscal behavior is essentially built into the system. This is not simply a case where fiscal advisors can rely on directing public authorities to behave in responsible ways (as perhaps envisioned in the FGT). The system itself induces fiscally irresponsible behavior: it is *endogenous* to the system. The solution to the problem thus involves a fundamental reform of political and fiscal institutions to alter the whole structure of incentives for budgetary decision-making.

The issue of soft budget constraints and the perverse incentives they create is a major theme in much of the recent literature in fiscal federalism. And rightly so. This is not simply a nicety of formal theory, but a pervasive practical problem that represents, in the view of many of us, one of the principal dangers in a decentralized fiscal system. Indeed, we have seen intergovernmental fiscal behavior in some countries (like Argentina and Brazil) reach such proportions as to destabilize the entire fiscal system and the economy as well. In some cases, politically powerful provincial governors have relied on expandable transfers from the center and the issuance of bonds to publicly owned banks to finance huge deficits in their budgets, contributing to major fiscal and economic crises.¹⁶

The recognition of this problem raises two major questions. First, why can't central governments commit themselves credibly to avoiding fiscal bailouts? What, in short, is the source of the motivation for what, in the end, turns out to be perverse and destructive behavior? In light of this, the second question then becomes that of how the economic and fiscal system might be restructured to get out of this dilemma. The new literature addresses both of these matters, and I will treat each of them briefly.

The motivation issue can, in fact, be a fairly complicated one with several facets (Kornai, Maskin and Roland, 2003, pp, 1098–1100). In the Goodspeed model, for example, the central government, should it fail to rescue the deficit plagued local government, suffers on two basic counts: first, the welfare of the locality itself will fall below desired levels because of inefficiently low levels of local public outputs, and, second, this may have electoral consequences for central authorities, as disconsolate voters place some of the blame on the center. There may thus be both economic and political motives for bailouts. Wildasin (1997) constructs a model in which local government behavior has spillover effects on other jurisdictions. Allowing a locality to "fail" thus has repercussions throughout the system. In particular, the Wildasin treatment suggests that bailouts are more likely for larger local jurisdictions than smaller ones (in spite of the higher costs), since the external consequences are likely to be of a much greater magnitude for the former. This is the so-called "Too big to fail" case (which, incidentally, was part of the debate some years ago when the city of New York faced a severe fiscal crisis). The political issues here can be both complex

and subtle. There may, for example, be important “reputational effects.” A major financial collapse by a local government can suggest that central authorities have somehow failed in their responsibility to provide proper oversight. Especially where local officials (perhaps provincial governors) are politically powerful, they may be able to shift the blame for local fiscal failures onto central politicians who failed to provide needed and expected support. Finally, there may simply be basic elements of corruption present with standard forms of bribery at the source of the problem. There is thus a broad range of potential motives (by no means mutually exclusive) for fiscal bailouts. This itself is an important subject of ongoing research.

In the intergovernmental setting, fiscal rescue or bailouts can take various forms. Most countries have systems of intergovernmental grants under which funds are transferred from the center to local governments. Such grants, as treated in the FGT, can, in principle, serve important economic functions. Appropriately designed matching grants in the Pigouvian spirit can serve to internalize the interjurisdictional spillover benefits associated with certain local outputs. In addition, lump-sum grants to poorer jurisdictions can address redistributive objectives. But such grants can also be a mechanism for fiscal rescue. Through an expansion of these transfers, central authorities can come to the aid of local governments in fiscal distress. Alternatively, the center can assume local debts or make loans to local governments to avert fiscal crises; in certain instances, this effectively makes the resources of the central bank available to lower-level governments.

This brings us to the second question. What kinds of economic and political institutions can minimize these perverse incentives? One obvious response is greater centralization. By minimizing the role of local government, there will simply be less scope for locals to seek fiscal assistance; they will have less capacity to raid the fiscal commons. But this can amount to throwing the baby out with the bath water. Central governments, as we all know, can themselves exploit their monopoly position. Indeed, a forceful part of the case for fiscal decentralization is to diffuse the exploitative powers of government (e.g., Brennan and Buchanan, 1980; Qian and Weingast, 1997). Even where the center does not have a strong executive element, a national legislature can itself be a loose alliance of regional or local representatives who seek special benefits for their own jurisdictions. The formation of coalitions with logrolling behavior in such a setting can easily lead to inefficient patterns of budgetary outcomes (e.g., Besley and Coate, 2003). The challenge is rather one of determining the kinds of institutions that can accommodate fiscal decentralization so as to realize the political advantages and economic gains from local control, while avoiding the potentially distorting and destabilizing effects that can result from soft budget constraints.¹⁷

Let me mention very briefly here some of the elements that the new literature considers as mechanisms for the hardening of budget constraints for local governments.¹⁸ First, there are features of a well developed market economy that can themselves contribute to hard budget constraints:

- (1) Efficient credit markets in the context of a mature banking system can provide an important source of discipline for local government finance. Poor fiscal performance by a local government will, in such a setting, result in reduced access to credit and higher interest rates.

- (2) Efficient land markets in the context of mobile factors can also encourage responsible local fiscal decision-making. Excessive debt or wasteful public decisions can manifest themselves in reduced local property values and encourage the exit of economic agents to other, better managed jurisdictions. In addition, as Qian and Roland (1998) argue, competition among local governments to attract mobile capital can reduce the incentives for bailouts by raising the opportunity cost of subsidizing inefficient enterprises.

Second, there are fiscal institutions that are essential to hard budget constraints:

- (1) Of obvious importance is the existence of a reliable and effective local system of taxation to provide the revenues needed to finance local programs. Local jurisdictions need to weigh the benefits of proposed public programs against their costs. And a good system of local taxation will make those costs apparent to the local electorate and will provide the requisite source of funds.
- (2) The system of intergovernmental grants must function so as to meet its basic allocative and redistributive functions without being subject to manipulation so as to provide fiscal bailouts. This can admittedly be tricky. As made clear in the FGT, there is a role for matching grants to internalize the spillover benefits from local public outputs. But such grants should not be expansive in the sense of providing additional transfers to relieve local fiscal pressures.

An economic setting of well developed and efficient markets combined with a fairly decentralized political system, characterized by healthy competition among jurisdictions, can thus go a long way to producing the hard budget constraints needed for local government to function well. However, these institutions may not always exist, especially in the developing and transitional nations. In such cases, the literature points to certain kinds of measures that can serve to harden local budget constraints:

- (1) Constitutionally or legislatively imposed balanced-budget constraints that effectively make it unlawful for local governments to run deficits on current account spending;
- (2) Limitations on debt issues that constrain borrowing to the finance of capital projects with careful definitions of what capital spending encompasses.
- (3) Well designed public bankruptcy laws that specify clearly how fiscal crises will be handled.

There isn't space here to elaborate on this simple listing of economic and political institutions and policy measures. But it is worth noting that the particular form and configuration of these institutions that is best suited to a particular country surely depends upon on the specific political, economic, and cultural institutions and its historical traditions. There is no simple, universal blueprint here, but there are some useful guidelines. We still have much to learn about the critical inter-relationships between the market economy and fiscal structure: how they can strengthen and reinforce one another in promoting stable, efficient, and equitable outcomes. But, as Inman (2003) points out in his review of the U.S. experience, "A primary lesson from this fiscal history is that central governments can resist the

political and economic need for local government bailouts if the appropriate market and fiscal institutions are in place. . . ” (p. 61).

Finally, there is a certain understandable, if curious, ambivalence that runs through some of this literature on the relative power of central and decentralized levels of government. On the one hand, we have noted the case that many authors, both old and new, have made for decentralization as a means for controlling the aggrandizing tendencies of the public sector and limiting detrimental intrusions into the operation of private markets, as well as encouraging the development of democratic institutions. On the other hand, the recent literature (and experience in several countries) suggests that a weak center can be manipulated by strong regional interests in quite destructive ways. Blanchard and Shleifer (2000), for instance, argue that fiscal decentralization has been far more successful in China than in Russia, because a strong center in China (in contrast to Russia) has been sufficiently powerful to resist “local capture” and restrain debilitating practices at local levels. This raises a very complicated and tricky issue. Fiscal decentralization, in order to be effective, may itself require a reasonably strong central government—one with sufficient power and resolve to withstand unhealthy demands from lower levels of government. More on this later.

3.3. Fiscal Federalism, Risk-Sharing, and Interjurisdictional Insurance

Another important theme in the new literature has been the exploration of the role of central government in performing an insurance function in the intergovernmental fiscal system (e.g., Persson and Tabellini, 1996a and 1996b; Bucovetsky, 1997; Lockwood, 1999). Different jurisdictions or regions in a federal system may themselves be subject to imperfectly correlated stochastic shocks that reduce incomes or increase costs so as to reduce local welfare. In principle, there can exist a system of intergovernmental assistance that is sensitive to such shocks—that provides additional assistance to jurisdictions that are experiencing negative shocks to their economic and fiscal well-being. This issue, incidentally, is of great concern and interest in Europe, where the advent of monetary union under EMU has meant the loss of macro-policy stabilization powers at the member nation level. Member countries have not only lost their monetary and exchange-rate prerogatives, but have made commitments under the Maastricht Treaty and the Stability and Growth Pact that seriously constrain their capacity to use fiscal measures for countercyclical purposes. In such a setting, is there a basic role for the center in providing “insurance” against exogenous shocks—and if so, what can economic analysis say about its particular form?

Lockwood (1999) has explored this problem in a model in which the central government employs intergovernmental grants both to internalize spillover effects from outputs of local public goods and to provide “risk-sharing contracts” among the jurisdictions in the presence of stochastic shocks of various sorts. If individuals exhibit risk-averse preferences, Lockwood finds that the form and magnitude of the optimizing grant may differ from the standard Pigouvian measure where the matching rate depends solely on the level of the external benefits. For various cases, the optimal grant will typically be a nonlinear function of local outputs and may be greater or less than the magnitude of the spillover benefits.

A fundamental problem with important practical implications that emerges in such insurance models is a standard moral hazard problem (Bucovetsy, 1997; Perrson and Tabellini, 1996a). When “central insurance” is available, a local jurisdiction will tend to underprovide outputs or programs that improve the local economy’s capacity to adjust to exogenous shocks. Perrson and Tabellini reach the interesting result that the extent of the moral hazard problem depends in basic ways on the nature of the federal fiscal constitution. In their framework, the centralization of the insurance function with the central government directly providing insurance to individuals can, under certain circumstances, better address the moral hazard problem than can a system of “confederation” with transfers among governments.

Centrally provided insurance to local governments thus comes at a price. To take a concrete example, consider the fiscal pressures on state and local governments resulting from the onset of a serious recession. Subject to balanced-budget constraints, states and localities find that when their revenues decline in a recession, they must respond by cutting expenditures and laying off workers. And this only worsens matters in the aggregate. This problem has long been recognized; in the 1940’s, Hansen and Perloff (1944) described this phenomenon as the “fiscal perversity hypothesis.” In such a context, it makes some sense for the central government to provide fiscal assistance to the states and localities so that they can maintain their levels of spending. Indeed several observers have argued in the context of the recent recession in the U.S. that the most effective countercyclical program would be one of federal assistance to state and local governments. But there is an obvious moral-hazard problem here. If the central government stands ready to bail decentralized governments out of their fiscal distress, it blunts the incentives for state and local officials to make sensible provision for hard times. Most state and local governments try to some extent to build up “rainy day funds” during good times and draw them down during lean periods. These funds are admittedly not always adequate, especially when revenues are reduced for protracted periods of time. But to provide extensive insurance comes at a cost of inefficiently low levels of preparation. Moreover, the existence of such insurance programs could easily, in some circumstances, be a prelude to an extension of assistance to regions or localities to relieve fiscal distress from all sorts of causes; they could, in short, come to provide a rationale for fiscal bailouts and a general softening of budget constraints. There exists a real conflict of objectives here that presents a difficult tradeoff in the design of fiscal institutions and budgetary procedures.

Similar sorts of issues have arisen in the context of European monetary union (EMU). There was a general sense that monetary union required a set of rules for fiscal behavior to prevent member nation policies from undermining the credibility of the European Central Bank commitment to monetary stability (Franco, Balassone and Francese, 2003). The result, under the Maastricht Treaty in 1992, was an agreement among those nations joining the EMU to strict limitations on the size of their deficits (3% of GDP) and their public debt (60% of GDP). This was reinforced in 1997 by the Stability and Growth Pact, which requires member countries to meet a medium-term goal of a budget that is “close to balance or in surplus.” More generally, as Rattso (2003) points out, the evolution of fiscal institutions in the European Union (as well as the EMU) involves fundamental “common pool problems.” In principle, to establish proper incentives for fiscal choices, each level of government should employ a set of benefit taxes to provide the proper signals to public officials and

to the electorate for decisions on public programs. But this is difficult to do; moreover, the establishment of the E.U. involves a range of objectives including some redistributive ones. And this inevitably creates some adverse incentive problems. As Rattso points out, “Establishing a supernational center may create new sources of fiscal indiscipline” (p. 8). One of the fundamental challenges in the design of new European fiscal institutions will involve addressing these common-pool problems in ways that create hard budget constraints for the member nations.¹⁹

4. Stability and “Self-Enforcing” Elements in Federal Systems

The FGT of fiscal federalism took as given an existing, stable, and self-perpetuating underlying federal structure. Within this given structure, the economic literature on federalism examined the allocation of functions among levels of government and the properties of various intergovernmental fiscal institutions. But, as much of the recent (and some older) work points up, this is an assumption not to be taken lightly. The stability and perpetuation of federal institutions, and indeed of the nation-state itself, are not inviolable.

Nations themselves can disintegrate. Some recent literature offers provocative insights into the nature of the economic glue that holds nations together and the opposing forces that tend to pull them apart. Economic union can provide large economic gains in terms of reducing the costs of providing important “national public goods,” most notably national defense. Riker (1964), a political scientist, has argued that an “external military-diplomatic threat or opportunity” is “. . . a necessary condition for the creation of a federalism” (pp. 12 and 13). But, as the economic literature emphasizes, there are other sources of important gains from nation formation including the facilitation of trade. In their insightful survey of this issue, Bolton, Roland, and Spolare (1996) point out that “When two nations unite, average trading costs are reduced since some international transactions now become domestic transactions” (p. 700).

However, there can be significant costs in such national union, costs that, if sufficiently large, can encourage secession. In an early piece on this issue, Buchanan and Faith (1987) consider a model in which certain jurisdictions exploit others through a system of centralized taxes and transfers; when the exploited jurisdictions find that their losses exceed the gain from union, they have an incentive to secede. In fact, such incentives may establish limits on the extent of such interjurisdictional exploitation. It is interesting that regional transfers have, in fact, provided the basis for proposals for national disintegration in countries like Italy. But the costs of union need not come from such explicit exploitation. In their model, Bolton and Roland (1997) show that differences in regional tastes that cannot be accommodated under a national regime (in their case it is differences in the distribution of income and desired redistributive programs) can also induce disintegration. Interestingly, the threat of secession again can place limits on national policies.²⁰

But the breakdown of the proper functioning of a federal fiscal system need not involve the explicit disintegration of the nation. Forces working within society and the public sector can undermine the structure and working of a federal government. De Figueirido and Weingast (2002) point out that a federal system is subject to two basic threats:

- (1) Central intrusion (or takeover) leading to the destruction of an effective federal structure through the loss of power at decentralized levels;
- (2) The impairment of federal institutions through opportunistic efforts at decentralized levels to raid the fiscal commons and obtain “local” benefits at the expense of other jurisdictions.

There are plenty of examples of federal breakdowns stemming from each of these sources. It is interesting that some of the earlier writers foresaw centralization as the primary tendency and threat to the stability of federal systems. De Tocqueville, writing in the 19th century and whom I cited earlier, concludes, after a lengthy consideration of the “inclinations” in democratic states, that “I am of the opinion that, in the democratic ages which are opening upon us . . . centralization will be the natural government” (p. 296). Likewise, Lord Bryce (1893), in completing his encyclopedic, two-volume study of federalism in the United States, finds that the “centripetal forces” are “permanent and secular forces, working from age to age” to promote a continuing centralization of government (p. 844). He predicts (as part of this general tendency) that in the United States “. . . the importance of the States will decline as the majesty and authority of the National government increase” (p. 844). Writing much later, Riker (1964) concurs, “. . . federalism in the United States is likely to be centralized further as time goes on” (p. 110).

The stability of a system of federal governance is, in fact, a delicate balancing act. There are potentially quite powerful incentives for destructive behavior that can manifest themselves at either the center or regional/local levels. As we have seen, the SGT has explored the latter in game-theoretic analyses of soft budget constraints and fiscal bailouts. From a broader perspective, the point is that political and fiscal institutions have elements that are *endogenous* to the system (Weingast, forthcoming). In some instances these institutions may contain the seeds of their own destruction, while, in other cases, they provide for their own perpetuation—for a “self-enforcing” federalism.

The foregoing suggests that a stable and enduring federal structure must have, on the one hand, a central government that is sufficiently strong to rein in regional and local governments so that the system is not undercut by aggressive jurisdictional “beggar-thy-neighbor” policies, and, on the other hand, adequate constraints to keep the central government within its sphere. What sorts of institutions can create this kind of environment? This issue is obviously itself a subject for a lengthy discourse, but let me simply conclude this essay with a brief glimpse into some of the emerging literature on “self-enforcing” federalism.²¹

Some valuable insights can come from a consideration of failed systems. In the case, for example, of the U.S. Articles of Confederation (1781–1788), the structure ultimately collapsed (at least in part) because of inadequate powers at the center (Dougherty, 2001; Weingast, forthcoming). In particular, the central government was unable to perform three basic functions: to mobilize sufficient resources (in the absence powers of own taxation) to defend the country; to provide a stable national currency, and to prevent the establishment of damaging internal trade barriers. It simply couldn’t address effectively critical common-pool problems.²²

In addition to a properly equipped central government, a strong and healthy market economy, as discussed earlier, can discipline regional and local governments. Effective private

credit markets and mobile flows of productive resources and goods limit the capacity of decentralized governments to exploit the commons by making beggar-thy-neighbor policies more costly. More generally, Qian and Weingast (1997) argue that a properly structured federal system and a market economy can interact in ways that can be mutually reinforcing to provide what they call a system of “market-preserving federalism.” From this perspective, a relatively decentralized public sector in which regional/local governments have the primary responsibility for providing public services and exercising key regulatory powers in the context of a common market without barriers to trade and a setting of hard budget constraints can provide a system with a “credible commitment” to protecting and encouraging the operation of private markets. In return, strong markets contribute to the viability of the federal structure of the public sector.

A critical dimension of this perspective is the role of fiscal competition. “Competition among jurisdictions forces governments to represent citizen interests and to preserve markets” (Qian and Weingast, 1997, p. 88). Such competition effectively punishes local officials for inefficient intrusions into markets. And, in so doing, it reinforces hard budget constraints at regional and local levels. Thus, pervasive competition both in private markets and within the public sector helps to create a setting in which institutions can persist—in which intrusive and destructive behavior is discouraged by an effective set of penalties.²³

There remains the fundamental question of how to contain the central government in order to prevent the collapse of the federal system by a takeover from the top. This is obviously a complex issue. But the emerging (and some older) literature suggests various constitutional and operational checks and balances; these include a fundamental role for the judiciary (e.g., Inman and Rubinfeld, 1997b), limiting the stakes of national politics by decentralizing authority, and an effective party system with strong local elements (Riker, 1964, and Weingast, forthcoming).

While my remarks here are little more than suggestive, the point is that parts of the SGT are moving beyond a purely static view of the incentive structure and potential performance of federal institutions to a broader consideration of the evolution of federal structure over time with attention to the stability of institutions and their capacity to be “self-enforcing.” A successful system of fiscal federalism must be able to sustain itself over time.

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Notes

1. A contrasting and competing view of the public sector was also emerging during this period. In particular, Buchanan and Tullock (1962) were initiating the effort to develop the new “public choice” approach to collective action. I will return to this later. See also Boadway (1997) for an insightful characterization of the earlier view of public finance.

2. The explanatory power of this conception of intergovernmental grants is admittedly somewhat problematic. Inman (1988), for example, has found that a model of “redistributive politics” explains the pattern of growing intergovernmental aid in the U.S. better than the conventional economic efficiency and equity arguments.
3. See especially the essays in McLure (1983). In this volume, Musgrave (1983) provides one of the useful early treatments entitled “Who Should Tax Where and What?”
4. For a recent and illuminating treatment of how local property taxation fosters efficient local budgetary decisions, see Fischel (2001).
5. For a survey of the early literature on this issue, see Oates (1972, ch. 3). For a more comprehensive treatment, see Boadway and Flatters (1982).
6. And, of course, even “uniform” national programs can have significantly different local outcomes where they are administered locally.
7. The Tiebout model, as the author himself stresses, provides a mechanism for preference revelation—a theoretical solution (as Garzarelli, 2004, puts it) to a problem of “organizational design.” It solves an information problem. As Seabright (1996) contends, “Tiebout’s model is best seen as a pioneering contribution to the theory of mechanism design, rather than saying anything about the decentralisation of power in government” (p. 63). Indeed, some of Tiebout’s colleagues suggested to me (long ago!) that Tiebout himself never saw his paper as providing a description of how local finance actually works—rather he saw it as part of the theoretical dialogue on public goods. And that’s the way the paper reads; there is virtually no discussion, for example, of taxation in the paper. It is later writers who have argued that the model has real explanatory power [see, for example, Fischel’s (2001) recent treatment].
8. This point is of some importance because the Tiebout model is often viewed as describing a peculiarly U.S. phenomenon; so-called “Tiebout sorting” is thought by many to be less relevant in Europe and elsewhere. For this reason, I simply want to make the point that the basic theory of fiscal federalism is not founded on the Tiebout model. In this regard, Rhode and Strumpf (2003) have recently provided some evidence that long-run trends in geographic segregation in the U.S. are not consistent with the Tiebout prediction.
9. For comprehensive surveys of this literature, see, for example, Sinn (1994, 1997), Wellisch (2000), Wilson (1996, 1999), and Oates (2002).
10. This is the basic theme of the “new institutional economics.” See, for example, the excellent collection of studies (several of fiscal decentralization) in Picciotto and Wiesner (1998).
11. Boadway (1997) provides a rich and insightful discussion of the introduction of “imperfect information” into the corpus of public finance. In an important paper, Cremer, Estache and Seabright (1996) explicitly ask what we can learn about fiscal decentralization from the theory of the firm. In an interesting exchange, one reviewer of this paper contends that the primary roots of the SGT are to be found in the integration of imperfect information into the analysis. Indeed, one can argue that with full and perfect information, there is no need for a public sector at all, for, in such a setting “. . . self-interested individuals would presumably use their knowledge to extract all possible pareto-superior gains from the economy because they have a mutual interest in doing so” (Tresh, 1995, p. 19). However, I have chosen to give the new political-economy literature joint-billing with imperfect information. There are a range of matters (e.g., Arrow problems, redistributive issues, etc.) that seem to transcend purely information problems.
12. The SGT literature provides a variety of approaches to modeling the centralization-decentralization tradeoff. Janeba and Wilson, (2003), for example, develop a model in which inefficiencies in local provision have their source in tax competition, while inefficiencies under a centralized system result from minimum-winning coalitions within a centralized legislature. Brueckner (2004) provides some numerical simulations that explore the tradeoff between the inefficiencies in local taxation and the gains from local provision under Tiebout sorting.
13. An intriguing case where a direct application of the principal-agent framework may well be appropriate is that of New Zealand, which Schick (1998) describes as “government by contract.” Hundreds of contracts, that are essentially performance agreements, are negotiated each year among various public agents. “The typical contract specifies the resources that one side will provide and the performance the other side will produce” (p. 124).
14. There is now a large body of papers making use of the principle-agent approach to modeling fiscal federalism. To mention only a few, see Cremer, Estache and Seabright (1996), Raff and Wilson (1997), Bucovetsy, Marchand and Pestieau (1998), and Bordignon, Manasse and Tabellini (2001). Garzarelli and Liman (2003) have taken this issue a step beyond the traditional principle-agent framework into a setting of “knowledge

- asymmetry.” In such a world, the principal may not even be aware of the full set of possible actions available to the agent. They contend that the role of central government in this expanded setting becomes not one of simply resolving conflicts of incentives, but one that promotes organizational flexibility to facilitate adaptation to changing conditions.
15. Wildasin (2004) provides an insightful analytical treatment of the nature of soft and hard budget constraints in the public sector and their implications for fiscal bailouts.
 16. For an excellent set of case studies of soft budget constraints encompassing OECD countries, developing nations, and transitional economies, see Rodden, Eskeland and Litvack (2003).
 17. Frey and Eichenberger (1999) propose an intriguing alternative approach to decentralization that involves the creation of “functional, overlapping, and competing jurisdictions.” In their setting, separate jurisdictions would exist for the provision of specific public services. Individuals would thus be part of a group of overlapping jurisdictions that would compete against one another in the provision of their respective public services. This competition would lead to local outputs that are responsive to local demands and that are provided in a cost-effective fashion. See Reifschneider (forthcoming) for a rigorous treatment of the Frey-Eichenberger model.
 18. For useful treatments of this issue, see Rodden, Eskeland and Litvack (2003), especially their “Introduction and Overview” chapter to their book, and Inman’s study (2003) of the United States in this same volume.
 19. As Rattso reminds us, common-pool problems can easily exist in a centralized, as well as a decentralized, regime. In the Besley-Coate (2003) model, for example, the national legislature is composed of representatives from local jurisdictions. In outcomes such as those from a minimum winning coalition, some jurisdictions can effectively exploit others. Centralization does not necessarily get us “cooperative” solutions that internalize all the relevant spillovers.
 20. This is part of a larger literature on the economics of nation-formation. See, for example, Alesina and Spolare (1997).
 21. In an earlier treatment, Hicks (1978) provides a useful discussion (including case studies) of how federal systems get started and how they sustain themselves.
 22. For a contrary view of the Articles of Confederation, see the provocative case made by Sobel (1999, 2002).
 23. Besley and Case (1995) provide an interesting variant on the fiscal competition argument in terms of what they call “yardstick competition.” Because of imperfect information concerning the behavior of local officials, the local electorate can look to fiscal performance in other (neighboring) jurisdictions to provide a benchmark against which to assess the performance of their own elected officials. Bordinon, Cerniglia and Revelli (2002) develop this approach and provide some intriguing evidence based on fiscal and electoral behavior in a sample of Italian cities.

References

- Alesina, A. and E. Spolare. (1997). “On the Number and Size of Nations,” *Quarterly Journal of Economics* 112, 1027–56.
- Arrow, K. (1970). “The Organization of Economic Activity: Issues Pertinent to the Choice of Market Versus Non-Market Allocation.” In Joint Economic Committee, *The Analysis and Evaluation of Public Expenditures: The PPB System*, Vol. I. Washington, D.C.: U.S. GPO.
- Besley, T. and A. Case. (1995). “Incumbent Behavior: Vote-Seeking, Tax-Setting, and Yardstick Competition,” *American Economic Review* 85, 25–45.
- Besley, T. and S. Coate. (2003). “Centralized Versus Decentralized Provision of Local Public Goods: A Political Economy Approach,” *Journal of Public Economics* 87, 2611–2637.
- Blanchard, O. and A. Shleifer. (2000). “Federalism with and without Political Centralization: China versus Russia,” unpublished paper.
- Boadway, R. (1977). “Public Economics and the Theory of Public Policy,” *Canadian Journal of Economics* 30, 753–772.
- Boadway, R. and F. R. Flatters. (1982). *Equalization in a Federal State: An Economic Analysis*. Ottawa: Economic Council of Canada.

- Bolton, P. and G. Roland. (1997). "The Breakup of Nations: A Political Economy Analysis," *Quarterly Journal of Economics* 112, 1057–1090.
- Bolton, P., G. Roland and E. Spolare. (1996). "Economic Theories of the Break-Up and Integration of Nations," *European Economic Review* 40, 697–705.
- Bordignon, M., F. Cerniglia and F. Revelli. (2002). "In Search for Yardstick Competition: Property Tax Rates and Electoral Behavior in Italian Cities," Munich: Cesifo Working Paper No. 644(1).
- Bordignon, M., P. Manasse and G. Tabellini. (2001). "Optimal Regional Redistribution Under Asymmetric Information," *American Economic Review* 91, 709–723.
- Brennan, G. and J. M. Buchanan. (1980). *The Power to Tax: Analytical Foundations of a Fiscal Constitution*. Cambridge: Cambridge University Press.
- Brueckner, J. K. (2004). "Fiscal Decentralization with Distortionary Taxation: Tiebout vs. Tax Competition," *International Tax and Public Finance* 11, 133–153.
- Bryce, J. (1893). *The American Commonwealth*. London: Macmillan [first published in 1888].
- Buchanan, J. M. and R. L. Faith. (1987). "Secession and the Limits of Taxation: Toward a Theory of Internal Exit," *American Economic Review* 77, 1023–1031.
- Buchanan, J. M. and G. Tullock. (1962). *The Calculus of Consent*. Ann Arbor, MI: The University of Michigan Press.
- Bucovetsky, S. (1997). "Insurance and Incentive Effects of Transfers Among Regions: Equity and Efficiency," *International Tax and Public Finance* 4, 463–483.
- Bucovetsky, S., M. Marchand and P. Pestieau. (1998). "Tax Competition and Revelation of Preferences for Public Expenditure," *Journal of Urban Economics* 44, 367–390.
- Cremer, J., A. Estache and P. Seabright. (1996). "Decentralizing Public Services: What Can We Learn from the Theory of The Firm?" *Revue d'Economie Politique* 106, 37–60.
- De Figueiredo, R. and B. Weingast. (2002). "Self-Enforcing Federalism," unpublished paper. Stanford University: The Hoover Institution.
- Dougherty, K. (2001). *Collective Action Under the Articles of Confederation*. Cambridge: Cambridge University Press.
- Fischel, W. (2001). *The Homevoter Hypothesis*. Cambridge, MA: Harvard University Press.
- Flatters, F., V. Henderson. and P. Mieszkowski. (1974). "Public Goods, Efficiency, and Regional Fiscal Equalization," *Journal of Public Economics* 3, 99–112.
- Franco, D., F. Balassone and M. Francese. (2003). "Fiscal Policy in Europe: The Role of Fiscal Rules," *National Tax Association Proceedings, Ninety-Fifth Annual Conference, 2002*, Washington D.C.: National Tax Association, 7–17.
- Frey, B. S., and R. Eichenberger. (1999). *The New Democratic Federalism for Europe: Functional, Overlapping, and Competing Jurisdictions*. Cheltenham, U.K.: Edward Elgar.
- Garzarelli, G. (2004). "The Theory of Fiscal Federalism as a Theory of Economic Organization: Assessment and Prospectus," unpublished paper.
- Garzarelli, G. and Y. R. Liman. (2003). "Knowledge, Coordination, and Fiscal Federalism: An Organizational Perspective," In D. Franco and A. Zanardi. (eds.), *I Sistemi di Welfare Tra Decentramento Regionale e Integrazione Europa*. Milano: FrancoAngeli, pp. 231–240.
- Goodspeed, T. J. (2002). "Bailouts in a Federation," *International Tax and Public Finance* 9, 409–421.
- Gordon, R. (1983). "An Optimal Tax Approach to Fiscal Federalism," *Quarterly Journal of Economics* 97, 567–586.
- Hansen, A. and H. Perloff. (1944). *State and Local Finance in the National Economy*. New York: Norton.
- Hicks, U. K. (1978). *Federalism: Failure and Success, A Comparative Study*. London: MacMillan.
- Inman, R. P. (1988). "Federal Assistance and Local Services in the United States: The Evolution of a New Federalist Fiscal Order," In H. Rosen (ed.), *Fiscal Federalism: Quantitative Studies*. Chicago: University of Chicago Press, pp. 33–74.
- Inman, R. P. (2003). "Transfers and Bailouts: Enforcing Local Fiscal Discipline with Lessons from U.S. Federalism," In J. Rodden et al.(eds.), *Fiscal Decentralization and the Challenge of Hard Budget Constraints*. Cambridge, MA: MIT Press, pp. 35–83.
- Inman, R. P. and D. L. Rubinfeld. (1992). "Fiscal Federalism in Europe: Lessons from the United States Experience," *European Economic Review* 36, 654–660.

- Inman, R. P. and D. L. Rubinfeld. (1996). "Designing Tax Policy in Federalist Economies: An Overview," *Journal of Public Economics* 60, 307–334.
- Inman, R. P. and D. L. Rubinfeld. (1997a). "Rethinking Federalism," *Journal of Economic Perspectives* 11, 43–64.
- Inman, R. P. and D. L. Rubinfeld. (1997b). "Making Sense of the Antitrust State-Action Doctrine: Balancing Political Participation and Economic Efficiency in Regulatory Federalism," *Texas Law Review* 75, 1203–1299.
- Janeba, E. and J. D. Wilson. (2003). "Optimal Fiscal Federalism in the Presence of Tax Competition," unpublished paper.
- Kornai, J. (1979). "Resource-Constrained Versus Demand-Constrained Systems," *Econometrica* 47, 801–819.
- Kornai, J. (1980). *Economics of Shortage*. Amsterdam: North Holland.
- Kornai, J., E. Maskin and G. Roland. (2003). "Understanding the Soft Budget Constraint," *Journal of Economic Literature* 41, 1095–1136.
- Levaggi, R. (2002). "Decentralized Budgeting Procedures for Public Expenditure," *Public Finance Review* 30, 273–95.
- Lockwood, B. (1999). "Inter-Regional Insurance," *Journal of Public Economics* 72, 1–37.
- Lockwood, B. (2002). "Distributive Politics and the Costs of Centralization," *Review of Economic Studies* 69, 313–337.
- McKinnon, Ronald I. (1997). "Market-Preserving Federalism in the American Monetary Union," In M. Blejer and T. Ter-Minassian (eds.), *Macroeconomic Dimensions of Public Finance: Essays in Honor of Vito Tanzi*. London: Routledge, pp. 73–93.
- McLure, Jr., C. E. (1967). "The Interstate Exporting of State and Local Taxes: Estimates for 1962," *National Tax Journal* 20, 49–77.
- McLure, Jr., C. E., (ed.). (1983). *Tax Assignment in Federal Countries*. Canberra: Australian National University.
- Musgrave, R. A. (1959). *The Theory of Public Finance*. New York: McGraw-Hill.
- Musgrave, R. A. (1983). "Who Should Tax Where and What?" In C. McLure (ed.), *Tax Assignment in Federal Countries*. Canberra: Australian National University, 2–19.
- Oates, W. E. (1972). *Fiscal Federalism*. New York: Harcourt Brace Jovanovich.
- Oates, W. E. (1985). "Searching for Leviathan: An Empirical Study," *American Economic Review* 75, 748–757.
- Oates, Wallace E. (1989). "Searching for Leviathan: A Reply and Some Further Reflections," *American Economic Review* 79, 578–583.
- Oates, W. E. (1996). "Taxation in a Federal System: The Tax Assignment Problem," *Public Economics Review* 1, 35–60.
- Oates, W. E. (2002). "Fiscal and Regulatory Competition: Theory and Evidence," *Perspektiven der Wirtschaftspolitik* 3, 377–390.
- Oates, W. E., and R. M. Schwab. (1988). "Economic Competition Among Jurisdictions: Efficiency-Enhancing or Distortion-Inducing?" *Journal of Public Economics* 35, 333–354.
- Oates, W. E. and R. M. Schwab. (1991). "The Allocative and Distributive Implications of Local Government Competition," In D. Kenyon and J. Kincaid, (eds.), *Competition Among States and Local Governments*. Washington, D.C.: The Urban Institute, pp. 127–145.
- Olson, Jr., M. (1969). "The Principle of 'Fiscal Equivalence': The Division of Responsibilities among Different Levels of Government," *American Economic Review* 59, 479–487.
- Padovano, F. (2004). "The Allocative Efficiency and Political Consequences of Centralized vs. Decentralized Income Redistribution Policies," unpublished paper.
- Perrson, T. and G. Tabellini. (1996a). "Federal Fiscal Constitutions: Risk Sharing and Moral Hazard," *Econometrica* 64, 623–646.
- Perrson, T. and G. Tabellini. (1996b). "Federal Fiscal Constitutions: Risk Sharing and Redistribution," *Journal of Political Economy* 104, 979–1009.
- Picciotto, R. and E. Wiesner. (1998). *Evaluation and Development: The Institutional Dimension*. Washington, D.C.: World Bank.
- Prud'homme, R. (1995). "The Dangers of Decentralization," *World Bank Research Observer* 10, 201–20.
- Qian, Y. and G. Roland. (1998). "Federalism and the Soft Budget Constraint," *American Economic Review* 88, 1143–1162.
- Qian, Y. and B. R. Weingast. (1997). "Federalism as a Commitment to Preserving Market Incentives," *Journal of Economic Perspectives* 11, 83–92.

- Raff, H. and J. D. Wilson. (1997). "Income Redistribution with Well-Informed Local Governments," *International Tax and Public Finance* 4, 407–427.
- Rattso, J. (2003). "Fiscal Federation or Confederation in the European Union: The Challenge of the Common Pool Problem," Working paper (March).
- Reifschneider, A. P. (forthcoming). *Competition in the Provision of Local Public Goods: Single Function Jurisdictions and Individual Choice*. Aldershot, U.K.: Edward Elgar.
- Rhode, P. W. and K. S. Strumpf. (2003). "Assessing the Importance of Tiebout Sorting: Local Heterogeneity from 1850 to 1990," *American Economic Review* 93, 1648–1677.
- Riker, W. H. (1964). *Federalism: Origin, Operation, Significance*. Boston: Little, Brown, and Company.
- Rodden, J. (2003). "Reviving Leviathan: Fiscal Federalism and the Growth of Government," *International Organization* 57, 695–729.
- Rodden, J., G. S. Eskeland and J. Litvack (eds.). (2003). *Fiscal Decentralization and the Challenge of Hard Budget Constraints*. Cambridge, MA: MIT Press.
- Samuelson, P. A. (1954). "The Pure Theory of Public Expenditure," *Review of Economics and Statistics* 36, 387–389.
- Samuelson, P. A. (1955). "Diagrammatic Exposition of a Theory of Public Expenditure," *Review of Economics and Statistics* 37, 350–356.
- Schick, A. (1998). "Why Most Developing Countries Should Not Try New Zealand's Reforms," *World Bank Research Observer* 13, 125–31.
- Seabright, P. (1996). "Accountability and Decentralization in Government: An Incomplete Contracts Model," *European Economic Review* 40, 61–89.
- Sinn, H.-W. (1994). "How Much Europe? Subsidiarity, Centralization and Fiscal Competition," *Scottish Journal of Political Economy* 41, 85–107.
- Sinn, H.-W. (1997). "The Selection Principle and Market Failure in Systems Competition," *Journal of Public Economics* 66, 247–274.
- Sobel, R. S. (1999). "In Defense of the Articles of Confederation and the Contribution Mechanism as a Means of Government Finance: A General Comment on the Literature," *Public Choice* 99, 347–356.
- Sobel, R. S. (2002). "Defending the Articles of Confederation: A Reply to Dougherty," *Public Choice* 113, 287–299.
- Tommasi, M. (2003). "Centralization vs. Decentralization: A Principal-Agent Analysis," unpublished paper.
- Tresh, R. W. (2002). *Public Finance: A Normative Theory*, 2nd edition. New York: Academic Press.
- Weingast, B. R. (1995). "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development," *Journal of Law and Economic Organization* 11, 1–31.
- Weingast, B. R. (forthcoming). "The Performance and Stability of Federalism: An Institutional Perspective," In Claude Menard and Mary Shirley, (eds.), *Handbook of the New Institutional Economics*. Kluwer Academic Press.
- Wellisch, D. (2000). *Theory of Public Finance in a Federal State*. Cambridge: Cambridge University Press.
- Wilson, J. D. (1996). "Capital Mobility and Environmental Standards: Is There a Theoretical Basis for a Race to the Bottom? In J. Bhagwati and R. Hudec, (eds.), *Fair Trade and Harmonization: Prerequisites for Free Trade?*, Vol. I. Cambridge, MA: MIT Press, pp. 393–427.
- Wilson, J. D. (1999). "Theories of Tax Competition," *National Tax Journal* 52, 269–304.
- Wildasin, D. E. (1997) "Externalities and Bailouts: Hard and Soft Budget Constraints in Intergovernmental Fiscal Relations," unpublished paper.
- Wildasin, D. E. (2004). "The Institutions of Federalism: Toward an Analytical Framework," *National Tax Journal* 57, 247–72.