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An Essay on Fiscal Federalism

WALLACE E. OATES[1]

1. *Introduction*

FISCAL DECENTRALIZATION is in vogue. Both in the industrialized and in the developing world, nations are turning to devolution to improve the performance of their public sectors. In the United States, the central government has turned back significant portions of federal authority to the states for a wide range of major programs, including welfare, Medicaid, legal services, housing, and job training. The hope is that state and local governments, being closer to the people, will be more responsive to the particular preferences of their constituencies and will be able to find new and better ways to provide these services. In the United Kingdom, both Scotland and Wales have opted under the Blair government for their own regional parliaments. And in Italy the movement toward decentralization has gone so far as to encompass a serious proposal for the separation of the nation into two independent countries. In the developing world, we likewise see widespread interest in fiscal decentralization with the objective of breaking the grip of central planning that, in the view of many, has failed to bring these nations onto a path of self-sustaining growth.

But the proper goal of restructuring the public sector cannot simply be decentralization. The public sector in nearly all countries consists of several different levels. The basic issue is one of aligning responsibilities and fiscal instruments with the proper levels of government. As Alexis de Toqueville observed more than a century ago, "The federal system was created with the intention of combining the different advantages which result from the magnitude and the littleness of nations" (1980, v. I, p. 163). But to realize these "different advantages," we need to understand which functions and instruments are best centralized and which are best placed in the sphere of decentralized levels of government. This is the subject matter of fiscal federalism. As a subfield of public finance, fiscal federalism addresses the vertical structure of the public sector. It explores, both in normative and positive terms, the roles of the different levels of government and the ways in which they relate to one another through such instruments as intergovernmental grants.[2]

[1] Professor of Economics, University of Maryland, and University Fellow, Resources for the Future. I am most grateful for a host of helpful comments on an earlier draft from Robert Inman, Ronald McKinnon, Daniel Rubinfeld, Robert Schwab, John Wallis, Barry Weingast, and three anonymous referees; for research assistance from Tugrul Gurgur; and for the splendid editorial guidance of John Pencavel and John McMillan.

[2] This economic use of the term "federalism" is somewhat different from its standard use in political science, where it refers to a political system with a constitution that guarantees some range of autonomy and power to both central and

My purpose in this essay is not to provide a comprehensive survey of fiscal federalism. I begin with a brief review and some reflections on the traditional theory of fiscal federalism: the assignment of functions to levels of government, the welfare gains from fiscal decentralization, and the use of fiscal instruments. I then turn to some of the new directions in recent work in the field and explore a series of current topics: laboratory federalism, interjurisdictional competition and environmental federalism, the political economy of fiscal federalism, market-preserving federalism, and fiscal decentralization in the developing and transitional economies. Some of this research is expanding the scope of the traditional analyses in important and interesting ways. This will provide an opportunity both to comment on this new work and to suggest some potentially fruitful avenues for further research.

2. *The Basic Theory of Fiscal Federalism: Some Comments*

The traditional theory of fiscal federalism lays out a general normative framework for the assignment of functions to different levels of government and the appropriate fiscal instruments for carrying out these functions (e.g., Richard Musgrave 1959; Oates 1972). At the most general level, this theory contends that the central government should have the basic responsibility for the macroeconomic stabilization function and for income redistribution in the form of assistance to the poor. In both cases, the basic argument stems from some fundamental constraints on lower level governments. In the absence of monetary and exchange-rate prerogatives and with highly open economies that cannot contain much of the expansionary impact of fiscal stimuli, provincial, state, and local governments simply have very limited means for traditional macroeconomic control of their economies. Similarly, the mobility of economic units can seriously constrain attempts to redistribute income. An aggressive local program for the support of low-income households, for example, is likely to induce an influx of the poor and encourage an exodus of those with higher income who must bear the tax burden.[3] In addition to these functions, the central government must provide certain "national" public goods (like national defense) that provide services to the entire population of the country.

Decentralized levels of government have their raison d'etre in the provision of goods and services whose consumption is limited to their own jurisdictions. By tailoring outputs of such goods and services to the particular preferences and circumstances of their

decentralized levels of government. For an economist, nearly all public sectors are more or less federal in the sense of having different levels of government that provide public services and have some scope for *de facto* decision-making authority (irrespective of the formal constitution). In retrospect, it seems to me that the choice of the term "fiscal federalism" was probably an unfortunate one, since it suggests a narrow concern with budgetary matters. The subject of fiscal federalism, as I suggest above, encompasses much more, namely the whole range of issues relating to the vertical structure of the public sector.

[3] It is straightforward to show that a system of decentralized poor relief is characterized by a garden-variety externality that results in suboptimal levels of support for the poor. More specifically, increases in support payments in one jurisdiction confer external benefits in the form of a reduced number of poor households elsewhere. On this, see Charles Brown and Oates (1985). There is, moreover, evidence for the U.S. that state-level decisions on levels of welfare support are interdependent; Luz Amparo Saavedra (1998), among others, finds that states have responded to decreases (increases) in benefit levels in other states by reducing (raising) their own benefits to welfare recipients. For an excellent survey of this whole issue, see Jan Brueckner (1998).

constituencies, decentralized provision increases economic welfare above that which results from the more uniform levels of such services that are likely under national provision. The basic point here is simply that the efficient level of output of a "local" public good (i.e., that for which the sum of residents' marginal benefits equals marginal cost) is likely to vary across jurisdictions as a result of both differences in preferences and cost differentials. To maximize overall social welfare thus requires that local outputs vary accordingly.

These precepts, however, should be regarded more as general "guidelines" than firm "principles." As has been pointed out in the literature, there is certainly some limited scope for decentralized macroeconomic efforts (Edward Gramlich 1987) and for assistance to the poor. In particular, there is a theoretical case for some poor relief at local levels (Mark Pauly 1973), and the fact is that state and local governments undertake a significant amount of redistributive activity.[4]

Moreover, this prescription is a quite general one. It does not offer a precise delineation of the specific goods and services to be provided at each level of government. And indeed the spatial pattern of consumption of certain goods and services like education and health is open to some debate. As a result, we find in cross-country comparisons some divergence in just what is considered, say, "local" in its incidence. The specific pattern of goods and services provided by different levels of government will thus differ to some extent in time and place.[5] This is to be expected. Nonetheless, there remains much to be said for the basic principle of fiscal decentralization: the presumption that the provision of public services should be located at the lowest level of government encompassing, in a spatial sense, the relevant benefits and costs.[6]

Let me offer three observations on the general theory. First, the foundations of the Decentralization Theorem need some elaboration. The theorem is itself a straightforward normative proposition that states simply that " . . . in the absence of cost-savings from the centralized provision of a [local public] good and of interjurisdictional externalities, the level of welfare will always be at least as high (and typically higher) if Pareto-efficient levels of consumption are provided in each jurisdiction than if *any* single, uniform level of consumption is maintained across all jurisdictions" (Oates 1972, p. 54). The theorem thus establishes, on grounds of economic efficiency, a presumption in favor of the decentralized provision of public goods with localized effects. While the proposition may seem almost trivially obvious, it is of some interest both in terms of setting forth the conditions needed for its validity and, with

[4] However, Martin Feldstein and Marian Vaillant Wrobel (1998) present some recent evidence suggesting that state government attempts to redistribute income are largely unsuccessful. They find that progressive state income taxes in the U.S. have had little impact on the net-of-tax relative wage rates of skilled versus nonskilled workers. Their claim is that the mobility of workers across state borders undoes efforts at redistribution—and does so very quickly. The result is no redistribution, only deadweight losses from inefficient locational decisions.

[5] For two useful treatments of the assignment of specific public services to the appropriate level of government, see Anwar Shah (1994, ch. 1) and Ronald McKinnon and Thomas Nechyba (1997).

[6] In Europe, proponents of fiscal decentralization refer to the "principle of subsidiarity." The precept here is that public policy and its implementation should be assigned to the lowest level of government with the capacity to achieve the objectives. This principle has been formally adopted as part of the Maastrict Treaty for European Union. Its intellectual roots, interestingly, are found in twentieth-century Catholic social philosophy. On this see Robert Inman and Daniel Rubinfeld (forthcoming).

some further analysis, for providing some insights into the determinants of the magnitude of the welfare gains from fiscal decentralization (Oates 1998).

But there is more to the story. The presumption in favor of decentralized finance is established by simply assuming that centralized provision will entail a uniform level of output across all jurisdictions. In a setting of perfect information, it would obviously be possible for a benevolent central planner to prescribe the set of differentiated local outputs that maximizes overall social welfare; there would be no need for fiscal decentralization (although one might wish to describe such an outcome as decentralized in spirit!). The response to this observation has been twofold. First, one can realistically introduce some basic imperfections (or asymmetries) in information. More specifically, individual local governments are presumably much closer to the people and geography of their respective jurisdictions; they possess knowledge of both local preferences and cost conditions that a central agency is unlikely to have. And, second, there are typically political pressures (or perhaps even constitutional constraints) that limit the capacity of central governments to provide higher levels of public services in some jurisdictions than others. These constraints tend to require a certain degree of uniformity in central directives. There are thus important informational and political constraints that are likely to prevent central programs from generating an optimal pattern of local outputs.

My second observation concerns the magnitude of the welfare gains from fiscal decentralization. We can, in principle, measure the gains from the decentralized provision of public goods relative to a more uniform, centrally determined level of output. The theory suggests that the magnitude of these gains depends both on the extent of the heterogeneity in demands across jurisdictions and any interjurisdictional differences in costs. In particular, we find that the potential gains from decentralization stemming from interjurisdictional differences in demand vary inversely with the price elasticity of demand. If the costs of provision are the same across jurisdictions, but demands differ, then the extent of the welfare loss from a centrally imposed, uniform level of output increases, other things equal, with the price inelasticity of demand.[7] There is a large body of econometric evidence that finds that the demand for local public goods is typically highly price inelastic. This suggests that the potential welfare gains from decentralized finance may well be quite large.[8]

Pursuing this point into the realm of positive economics, we might expect the magnitude of the potential gains from fiscal decentralization to have some explanatory power. Where these gains are large, we would expect to find that the public sector is more decentralized. In exploring this issue some years ago, I found some (perhaps vague) evidence in its support: in a sample of countries, the fiscal share of the central government varied inversely with an

[7] In tax analysis, we are accustomed to a quite different result: the deadweight loss varies directly with the price elasticity of demand. Here it is just the reverse, since the distortion takes place on the quantity, rather than the price, axis. But interestingly, if the source of the difference in efficient local outputs is cost differentials, then the gains from fiscal decentralization bear the opposite relationship to the case where their source is differences in levels of demand: these gains then vary directly with the price elasticity of demand (Oates 1998).

[8] For surveys of this econometric literature, see Rubinfeld (1987) and Oates (1996a). For an attempt actually to measure the welfare gains from decentralization, see David Bradford and Oates (1974); they find large gains.

index of "sectionalism," a measure of the extent to which people in geographical subareas of a country identify "self-consciously and distinctively with that area" (Oates 1972, pp. 207–208). More recently, Koleman Strumpf and Felix Oberholzer-Gee (1998), in a more sharply focused study of states and counties in the United States, find that the decision to allow counties a local option to legalize the consumption of alcoholic beverages depends significantly on a measure of the heterogeneity in preferences across counties within each state. There is, I think, some interesting work to be done in exploring the extent to which the potential gains from decentralization can explain the observed variation in actual governmental structure and policies.[9]

Third, I sense a widespread impression, suggested in some of the literature, that the gains from decentralization have their source in the famous Tiebout model (Charles Tiebout 1956). In this model, highly mobile households "vote with their feet": they choose as a jurisdiction of residence that locality that provides the fiscal package best suited to their tastes. In the limiting case, the Tiebout solution does indeed generate a first-best outcome that mimics the outcome in a competitive market. But the gains from decentralization, although typically enhanced by such mobility, are by no means wholly dependent upon them.[10] In fact, if there were absolutely nothing mobile—households, factors, or whatever—there would still exist, in general, gains from decentralization. The point here is simply that even in the absence of mobility, the efficient level of output of a "local" public good, as determined by the Samuelson condition that the sum of the marginal rates of substitution equals marginal cost, will typically vary from one jurisdiction to another. To take one example, the efficient level of air quality in Los Angeles is surely much different from that in, say, Chicago.

This point is of importance, because the Tiebout model is often viewed as a peculiarly U.S. construction. The relatively footloose households that it envisions, responding to such things as local schools and taxes, seem to characterize the U.S. much better than, say, most European countries. As a result, observers outside the U.S. tend to believe that this strand of the theory of local finance is of limited relevance in their settings. While there may well be some truth to this, it most emphatically does not follow that there are no longer any significant welfare gains from the decentralized provision of public goods.

3. *Fiscal Instruments in a Federal System*

To carry out their functions, the various levels of government require specific fiscal instruments. On the revenue side, governments will typically have access to tax and debt instruments. But in a federal system there is a further method for allocating funds among the different levels of the public sector: intergovernmental grants. One level of government may generate tax revenues in excess of its expenditures and then transfer the surplus to another level of government to finance part of the latter's budget. I want to review and

[9] Another interesting case is the setting of federal standards for safe drinking water. After mandating a set of standards for the quality of drinking water to be met in all jurisdictions in the Safe Drinking Water Act of 1974, the federal government has backed off and now allows a range of exceptions in recognition of the large interjurisdictional differences in per-capita costs of meeting the standards (U.S. Congressional Budget Office 1997).

[10] In certain settings, mobility can itself be a source of distorted outcomes. See, for example, the seminal paper by Frank Flatters, Vernon Henderson, and Peter Mieszkowski (1974).

comment briefly on the use of these fiscal instruments in a federal fiscal system.

3.1 *Taxation in a Federal System*

The determination of the vertical structure of taxes is known in the literature as the "tax-assignment problem" (Charles McLure 1983). And the basic issue here is the normative question: Which taxes are best suited for use at the different levels of government? The question is typically posed in a setting in which there exists a nation state with a central government, where there is little or no mobility across national borders; at decentralized levels, in contrast, economic agents, goods, and resources have significant mobility across jurisdictional boundaries with the extent of this mobility increasing at successively lower levels of government. "Local" government, for analytical purposes, may sometimes be characterized as operating in a setting in which economic units can move costlessly among jurisdictions.

The difference in the mobility of taxed units at the central and decentralized levels has important implications for the design of the vertical structure of taxation. Taxes, as we know, can be the source of distortions in resource allocation, as buyers shift their purchases away from taxed goods. In a spatial setting, such distortions take the form of locational inefficiencies, as taxed units (or owners of taxed items) seek out jurisdictions where they can obtain relatively favorable tax treatment. High excise taxes in one jurisdiction, for example, may lead purchasers to bear unproductive travel costs in order to purchase the taxed items in jurisdictions with lower tax rates.

Such examples can suggest the conclusion that decentralized levels of government should avoid the taxation of highly mobile economic units (be they households, capital, or final goods). But this in itself is not correct. The real implication is that decentralized levels of government should avoid *nonbenefit* taxes on mobile units. Or, more accurately, the analysis shows that on efficiency grounds decentralized governments *should* tax mobile economic units with benefit levies (Oates and Robert Schwab 1991; Oates 1996b). Such economic units, in short, should pay for the benefits that they receive from the public services that local governments provide to them.

The most well-known case of this is the earlier-discussed Tiebout model in which local jurisdictions use benefit taxes that effectively communicate to households the cost of consuming different levels of local public goods; this results in an efficient pattern of consumption of these goods. But this is true not only for households. If local governments provide local inputs that increase the productivity of capital employed in their jurisdictions, then they should levy benefit taxes on capital in order to provide the set of signals needed for the efficient deployment of capital across localities (Oates and Schwab 1991). In sum, efficiency requires not only that decentralized jurisdictions refrain from nonbenefit taxation of mobile economic units, but that they actively engage in benefit taxation where the public sector provides services to these units.

The public sector must for various reasons rely to a substantial extent on nonbenefit taxes. Redistributive programs that provide assistance to the poor, for example, simply transfer income. But, as noted earlier, such programs are not well suited to use at decentralized levels of government, where the mobility of economic units across local boundaries can undermine the workings of such programs. It is for this reason that the literature suggests that nonbenefit taxes, to the extent they are needed, are best employed by higher levels of government.

But provincial, state, and local governments do, in fact, make use of some such levies.[11] In a seminal treatment of this issue making use of an optimal taxation framework, Roger Gordon (1983) has explored the ramifications of the decentralized use of a wide range of nonbenefit taxes. And Gordon finds several forms of potential distortion that result from an individual jurisdiction's ignoring the effects of its fiscal decisions elsewhere in the system; these include inefficiencies involving, for example, the "exporting" of tax burdens, external congestion effects, and impacts on levels of revenues in other jurisdictions, as well as certain equity issues associated with a generally regressive pattern of tax incidence.[12]

The analysis suggests, moreover, some guidelines for the use of such taxes. A reliance on *resident-based* taxes rather than *source-based* taxes, for example, can lessen tax-induced distortions by reducing the scope for tax-exporting (Inman and Rubinfeld 1996; McKinnon and Nechyba 1997).[13] The analysis, moreover, establishes a presumption for the taxation of relatively immobile economic units. A particularly attractive tax base is unimproved land, since a tax on a factor or good in perfectly inelastic supply will not be the source of any locational inefficiencies. Such taxes (and any associated benefits from spending programs) will simply be capitalized into local land values. Thus, fiscally hard-pressed city governments have at their disposal a tax base that cannot escape them through mobility. There is some evidence in this regard that the city of Pittsburgh, which has used a graded property tax under which land is taxed at five times the rate on structures, has experienced an expansion in building activity that might not have been forthcoming in the presence of a higher tax on mobile capital (Oates and Schwab 1997).

3.2 *Intergovernmental Grants and Revenue Sharing*

Intergovernmental grants constitute a distinctive and important policy instrument in fiscal federalism that can serve a number of different functions. The literature emphasizes three potential roles for such grants: the internalization of spillover benefits to other jurisdictions, fiscal equalization across jurisdictions, and an improved overall tax system.

Grants can take either of two general forms. They can be "conditional grants" that place any of various kinds of restrictions on their use by the recipient. Or they can be "unconditional," that is,

[11] There is a lively and important debate in the local finance literature over whether or not local property taxation, as employed in the U.S., constitutes benefit taxation. Bruce Hamilton (1975, 1976) and William Fischel (1992) make the case that local property taxes combined with local zoning ordinances produce what is effectively a system of benefit taxation. Peter Mieszkowski and George Zodrow (1989) take the opposite view.

[12] See Inman and Rubinfeld (1996) for an excellent restatement and extension of the Gordon analysis. David Wildasin (1998a) provides a valuable survey of the various implications of factor mobility both for economic efficiency and for the redistributive impact of public policy.

[13] Resident-based taxes (also called "destination-based taxes") are levies on factors of production (such as land, labor, and capital) based on the owner's residence and on goods and services based on the residence of the consumer. In contrast, source-based taxes (or "origin taxes") involve taxing factors where they are employed and goods and services where they are purchased. Under resident-based taxation, governments have much less capacity to export the incidence of their taxes onto economic units elsewhere. Source-based taxes, however, are often easier to administer and, in certain forms, tend to be more commonly used by state and local governments.

lump-sum transfers to be used in any way the recipient wishes. The theory prescribes that conditional grants in the form of matching grants (under which the grantor finances a specified share of the recipient's expenditure) be employed where the provision of local services generates benefits for residents of other jurisdictions. The rationale here is simply the usual Pigouvian one for subsidies that induce individuals (in this case policy-makers or the electorate) to incorporate spillover benefits into their decision-making calculus. The magnitude of the matching shares, in such instances, should reflect the extent of the spillovers.[14]

In contrast, unconditional grants are typically the appropriate vehicle for purposes of fiscal equalization. The purpose of these grants is to channel funds from relatively wealthy jurisdictions to poorer ones. Such transfers are often based on an equalization formula that measures the "fiscal need" and "fiscal capacity" of each province, state, or locality. These formulae result in a disproportionate share of the transfers going to those jurisdictions with the greatest fiscal need and the least fiscal capacity.[15]

Although widely used, equalizing intergovernmental grants are by no means a necessary feature of fiscal federalism (Dan Usher 1995; Robin Boadway 1996). Economists normally think of redistributive measures from rich to poor as those that transfer income from high- to low-income individuals. Intergovernmental equalizing transfers require a somewhat different justification based on social values.[16] In practice, such equalizing grants play a major role in many countries: in the fiscal systems of Australia, Canada, and Germany, for example, there are substantial transfers of income from wealthy provinces or states to poorer ones. In the United States, in contrast, equalizing grants from the federal to state governments have never amounted to much. Intergovernmental grants in the U.S. typically address specific functions or programs, but usually do not accomplish much in the way of fiscal equalization. At the levels of the states, however, there are many such programs under which states provide equalizing grants to local jurisdictions—notably school districts.

Fiscal equalization is a contentious issue from an efficiency perspective. Some observers see such grants as playing an important role in allowing poorer jurisdictions to compete effectively with fiscally stronger ones. This view holds that, in the absence of such grants, fiscally favored jurisdictions can exploit their position to promote continued economic growth, some of which comes

[14] Matching grants (possibly negative) can, in principle, also serve to correct some of the distortions associated with the decentralized use of nonbenefit taxes (Gordon 1983).

[15] Fiscal equalization can also make use of matching grants. If the objective of the equalization program is to equalize taxable capacity, the granting government may choose to supplement the revenue base of fiscally poorer jurisdictions by matching any revenues they collect by some specified percentage. Such a measure has the potential of allowing all jurisdictions to raise the same tax revenues per capita for a given tax rate (irrespective of the actual size of their tax base). This form of fiscal equalization is sometimes called "power-equalization" and has gotten some attention in the U.S. for state programs to achieve various equity goals—most notably in the area of school finance (e.g., Feldstein 1976; and Nechyba 1996).

[16] The issue here is that from the perspective of redistributing income from rich to poor, equalizing intergovernmental grants are bound to have some perverse effects. For such grants, although transfering income from wealthy to poor *on average*, will inevitably result in some income transfers from poor individuals who reside in wealthy jurisdictions to rich persons in generally poor areas. In this sense, such equalizing measures are not as effective as programs that redistribute income from rich to poor *individuals*. But a society may well wish, for other reasons, to provide additional support for the provision of local public services (such as schools) in relatively low-income areas (e.g., Inman and Rubinfeld 1979).

at the expense of poorer ones. Fiscal equalization, from this perspective, helps to create a more level playing field for interjurisdictional competition.[17]

But the case is not entirely persuasive. Others have argued that fiscal equalization can stand in the way of needed regional adjustments that promote development in poorer regions. McKinnon (1997a), for example, contends that in the United States, the economic resurgence of the South following World War II resulted from relatively low levels of wages and other costs. It was this attraction of low wages and costs that ultimately induced economic movement to the South, bringing with it a new prosperity. Fiscal equalization, from this perspective, may actually hold back the development of poorer areas by impeding the needed interregional flow of resources (both emigration and immigration) in response to cost differentials.

But the primary justification for fiscal equalization must be on equity grounds. And it is as a redistributive issue that it continues to occupy a central place on the political stage. In some cases, as in Canada, it may provide the glue necessary to hold the federation together. In other instances, like Italy, it may become a divisive force, where regions, weary of large and longstanding transfers of funds to poorer areas, actually seek a dissolution of the union. Fiscal equalization is a complex economic and political issue.

The third potential role for intergovernmental grants is to sustain a more equitable and efficient overall tax system. For reasons we have discussed, centrally administered, nonbenefit taxes with a single rate applying to the national tax base will not generate the sorts of locational inefficiencies associated with varying rates across decentralized jurisdictions. Moreover, central taxes can be more progressive, again without establishing fiscal incentives for relocation. There is, in fact, considerable evidence to indicate that state and local systems of taxes are typically more regressive than central taxation (e.g., Howard Chernick 1992). There is thus some force in an argument for "revenue sharing" under which the central government effectively serves as a tax-collecting agent for decentralized levels of government.[18] The central government then transfers funds, in a presumably unconditional form, to provinces, states, and/or localities. It is certainly possible, where the polity wishes, to build equalizing elements into these transfers. While there is here a real case for the use of intergovernmental grants, a most important qualification is that such a system of grants must not be too large in the sense of undermining fiscal discipline at lower levels of government (more on this later).

The prescriptive theory of intergovernmental grants thus leads to a vision of a system in which there exists a set of open-ended matching grants, where the matching rates reflect the extent of benefit spillovers across jurisdictional boundaries, and a set of unconditional grants for revenue sharing and, perhaps, equalization purposes. Such a conception has, however, only modest

[17] As Boadway and Flatters (1982) have shown, equalizing grants may be required to offset distorting locational incentives where some jurisdictions offer pecuniary fiscal advantages to potential residents resulting, for example, from large, taxable natural resource endowments.

[18] This argument has even more force where, as in some developing countries and emerging democracies, provincial and local governments simply lack the capacity for effective tax administration. In this setting, central transfers and/or the piggybacking of supplementary rates on top of centrally administered taxes may be the only realistic options. See, for example, Inman (forthcoming).

explanatory power. We do, in fact, find federal matching programs that have supported a number of state and local activities with spillover effects, including, for example, grants for interstate highway construction. However, on closer examination, important anomalies appear. These grants are often closed, rather than open, ended. They thus do not provide incentives for expansion at the margin. Moreover, the federal matching shares are typically much larger than justifiable by any plausible level of spillover benefits. More generally, in a careful study of the intergovernmental grant system, Inman (1988) concludes that the economic theory of intergovernmental grants does not provide a very satisfactory explanation of the structure of U.S. grant programs; he finds that a political model can do a much better job of explaining U.S. grant programs.[19]

Some years ago, David Bradford and I (1971a,b) tried to lay the foundations for a positive theory of the response to intergovernmental grants by setting forth a framework in which the budgetary decisions of the recipients of such grants are treated explicitly in a collective-choice setting. In short, we treated these grants, not as grants to an individual decision-maker, but rather as grants to polities that make budgetary decisions by some collective algorithm (such as simple majority rule). This exercise produced some intriguing equivalence theorems. For example, it is straightforward to show that a lump-sum grant to a group of people is fully equivalent in all its effects, both allocative and distributive, to a set of grants directly to the individuals in the group. Moreover, this result applies to an important class of collective-choice procedures, encompassing several of the major models employed in the public-finance literature. These theorems, known as the "veil hypothesis," thus imply that a grant to a community is fully equivalent to a central tax rebate to the individuals in the community; intergovernmental grants, according to this view, are simply a "veil" for a federal tax cut.

The difficulty is that this hypothesis has not fared well in empirical testing. It implies that the budgetary response to an intergovernmental transfer should be (roughly) the same as the response to an equal increase in private income in the community. But empirical studies of the response to grants have rejected this equivalence time and again. Such studies invariably find that state and local government spending is much more responsive to increases in intergovernmental receipts than it is to increases in the community's private income. And this has come to be known as the "flypaper effect"—money sticks where it hits. While this finding may not be all that surprising, it is not so easy to reconcile with models of rational choice, for it suggests that the same budget constraint gives rise to different choices depending on what form the increment to the budget takes. There is now a large literature that tries in a variety of ways (some quite ingenious) to explain the flypaper effect.[20] James Hines and Richard Thaler (1995) have suggested recently that this is just one of a more general class of cases where having

[19] As Inman and Rubinfeld (1996) point out, the prescriptive theory of grants presumes a central planner or political process that "will select socially preferred policies" (p. 325). However, the public-choice literature makes clear the potential of central-government political mechanisms to make inefficient choices concerning policies that affect various groups differently. In addition, a grant-distributing agency may have its own objectives; for an excellent study of how such objectives can influence the pattern of grants, see Chernick (1979).

[20] For surveys and interpretations of this literature, see Gramlich (1977), Ronald Fisher (1982), Oates (1994), and Hines and Thaler (1995).

money on hand (e.g., from grants) has a much different effect on spending behavior than where the money must be raised (e.g., by taxation).

Much of the early empirical work on the expenditure response to intergovernmental grants studied the period from the 1950's through the 1970's, when these grants exhibited a continuing path of expansion. As a result, much of the interest focused on the budgetary response to increases in grants. However, in more recent times, efforts at fiscal retrenchment and devolution have led to large cuts in a wide range of federal grant programs. And this has raised the interesting and important question of whether the response to cuts in grants is similar in sign and magnitude to the response to increases in these grants. Gramlich (1987), for example, observed that during this period of retrenchment, state and local governments responded to the cutbacks in grants by picking up much of the slack: they increased their own taxes and replaced in large part the lost grant funds so as to maintain levels of existing programs. If Gramlich is right, then we should observe a basic asymmetry in response: the spending of recipients should be more responsive to increases in grant monies than to decreases in these revenues. This issue is of some importance if we are to understand the budgetary implications of the ongoing process of fiscal decentralization. In the first study of this issue, William Stine (1994), examining the response of county governments in Pennsylvania, found just the opposite of Gramlich's prediction: his estimates imply that these county governments not only failed to replace lost grant revenues, but that they reduced their spending from own-revenues on these programs as well, giving rise to a "super-flypaper effect." There are, however, some tricky and troublesome issues of measurement and interpretation in the Stine study. Subsequently, using national aggregate data on the state and local government sector, Shama Gamkhar and I (1996) were unable to reject the hypothesis that the expenditure response to increases and decreases in intergovernmental grants has the same absolute value per dollar of grants. Our findings are thus consistent with the proposition that the flypaper effect operates symmetrically in both directions. But much clearly remains to be done on this issue.

4. *A Note on Jurisdictional Boundaries*

The treatment to this point has implicitly taken as given a pattern of boundaries that divide the nation-state into a set of jurisdictions for decentralized governance. The existence and magnitude of spillover effects from localized public policies clearly depend on the geographical extent of the relevant jurisdiction. One way to deal with such spillovers is to increase the size of the jurisdiction, thereby internalizing all the benefits and costs. The problem, of course, is that such an extension may involve welfare losses from the reduced capacity to differentiate local outputs. There is clearly some kind of tradeoff here between internalizing spillover benefits (and costs) and allowing local differentiation.

In practice, much of the problem stems from a set of existing boundaries that are largely historically and culturally determined and that may make little sense in terms of the economic and geographical realities. Consider, for example, the United States. Suppose that we were to begin with a *tabula rasa*, a completely undefined set of boundaries for states and localities. And we set for ourselves the task of laying out both a rational set of levels of government and borders for the jurisdictions at each level of government. One thing seems clear: such a system of jurisdictions would bear little resemblance to our existing map. The states, in particular, are quite poorly designed to deal with the provision of certain important public goods, notably environmental resources. To take one example, rivers were used historically (for understandable reasons) to mark off one state from another. But from the perspective of effective management of a public good, this is the worst sort of border. It means that two independent and autonomous jurisdictions are making decisions that affect the public good whose output they jointly share. It seems clear that it would make much more sense to place such resources within a single jurisdiction. My own surmise is that a much more rational map would probably entail (1) some fairly sizeable regional governments that extend over watersheds, air sheds, and other environmental resources; (2) metropolitan governments that encompass center cities and the suburbs that house many city workers; and (3) smaller local governments that allow groups of residents to determine services of relevance mainly to themselves.

But political realities being what they are, we can expect to continue our collective life with much the same map in place. There does, however, remain some flexibility in terms of creating useful compacts or associations of jurisdictions to deal with particular issues. The management of the Chesapeake Bay, for example, is in important organizational ways now the joint enterprise of the relevant states (Delaware, Maryland, Pennsylvania, and Virginia), and Washington, D.C., with an important role also played by the federal government. Likewise, the recognition that the management of ground-level ozone involves pollutants that travel long distances across the midwestern and northeastern parts of the United States has led, under congressional legislation in 1990, to the formation of an Ozone Transport Region (OTR) for the coordination of efforts to manage air quality in eleven eastern states and the District of Columbia. Such regional organizations can be seen as the outcome of a kind of Coasian process in which interjurisdictional externalities are addressed through negotiation and coordinated decision-making. The history of such enterprises, however, attests to their difficulty. The fascinating study by Bruce Ackerman et al. (1974), for example, of the attempt to create a "model regional agency" in the form of the Delaware River Basin Commission reveals all the complexities and perverse incentives that can bedevil such joint enterprises. Nevertheless, such coordination does, in principle, offer an important avenue for addressing such interjurisdictional concerns.

5. *Laboratory Federalism and Welfare Reform*

It seems ironical in the light of the preceding treatment of principles (or guidelines) for fiscal federalism to find that welfare reform is in the vanguard of U.S. moves toward fiscal decentralization. The analysis suggests that the threat of mobility of both low and high income households will result in decentralized policies that provide too little assistance to the poor (sometimes described as a "race to the bottom"). Nevertheless, the decision has been made to shift the primary responsibility for poor relief back to the states. Under measures signed into law in 1996, the federal government has replaced the longstanding federal entitlement programs, which came with both detailed rules and generous matching grants to the states, by a system of block grants with few strings attached. The states now have broad scope to determine both the form and levels of assistance under their programs to assist poor households.[21]

How are we to understand this reform? Does it represent an outright rejection of the economic principles of fiscal federalism? My answer is a qualified no. There exists widespread recognition of, and concern with, the likely shortcomings of a decentralized system of poor relief. Policy makers are well aware of the threat of strategic cuts in state levels of welfare support. But, as I read it, we have decided to live with this threat in order to seek out superior policy alternatives. And this brings us to another dimension of fiscal federalism: laboratory federalism.

In a setting of imperfect information with learning-by-doing, there are potential gains from experimentation with a variety of policies for addressing social and economic problems. And a federal system may offer some real opportunities for encouraging such experimentation and thereby promoting "technical progress" in public policy. This point was made long ago by James Bryce (1888) who, in his insightful study of the U.S. system of government, observed that "Federalism enables a people to try experiments which could not safely be tried in a large centralized country" (Vol. I, p. 353). Better known is a later statement by Justice Louis Brandeis, who wrote in 1932 that

> There must be power in the States and the Nation to remould, through experimentation, our economic practices and institutions to meet changing social and economic needs . . . It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country. (Osborne 1988)

It is my sense that this is the primary thrust behind the current welfare reform. There exists much disappointment and dissatisfaction with the operation and results under the traditional federal welfare programs. But we really don't have a clear sense of how to restructure them to achieve our societal goals of providing needed relief and, at the same time, establishing an effective set of incentives to move people off welfare and into jobs. The recent legislation that transfers the responsibility for these programs back to the states represents, I believe, a recognition of the failure of existing programs and an attempt to make use of the states as "laboratories" to try to find out what sorts of programs can work.[22]

There are, in fact, a number of important and intriguing examples of policies whose advent was at the state or local level and that later became fixtures of federal policy. Unemployment insurance, for example, was a state-level policy before the federal government made it effectively mandatory on a national scale in the 1930s. More recently, in the area of environmental policy, the experience in a number of states with their own forms of Emissions Trading was an important prelude to the adoption, in the 1990 Clean Air Act Amendments, of a national trading program in sulfur allowances to address the problem of acid rain. Without this experience in a number of states, I seriously doubt that policy-makers would have been willing to introduce such a new and unfamiliar policy measure as tradeable emissions rights on a national

[21] For an excellent and recent review of this whole debate in a historical context, see Therese McGuire (1997). Rebecca Blank (1997) provides a concise and insightful treatment of the new welfare legislation and its potential implications.

[22] For a concurring view, see Craig Volden (1997).

scale. More generally, since the dawn of the nation, programs successfully developed at the state level have often provided models for subsequent federal programs.

States, of course, may learn from others so that the diffusion of successful policy innovations may be horizontal as well as vertical. Both forms of diffusion have been the subject of study by a number of political scientists. Virginia Gray (1973) and Everett Rogers (1983), for example, have found that the cumulative distribution of states by date of adoption takes the S-curve shape, familiar from the study of the spread of other forms of innovation. Others, like Jack Walker (1969), James Lutz (1987), David Huff et al. (1988), and David Nice (1994), have explored the geographical and other determinants of the pattern of adoptions by states. Empirical studies of vertical diffusion are less numerous. Thomas Anton (1989), Keith Boeckelman (1992), and Michael Sparer and Lawrence Brown (1996) have examined the extent to which federal measures draw on the experience of the states. Some of this literature is relatively skeptical of the link. Sparer and Brown, for example, argue that (at least for health care) "These laboratory adoptions and adaptations are probably more the exception than the rule" (p. 196).

What are we to make of all this? A little reflection suggests first that there is nothing in principle to prevent the central government from undertaking limited experiments without committing the nation to an untested and risky policy measure. Indeed, there have been a number of such social experiments with, for example, income-maintenance and housing-allowance programs that have generated valuable information about how programs work and the response of participants to various values of the key parameters. We don't necessarily need states as the "laboratories" for experiments. At the same time, one might suspect that relatively independent efforts in a large number of states will generate a wider variety of approaches to public policy than a set of centrally designed experiments.

A basic problem here is that there has been little in the way of a real theory of laboratory federalism to organize our thought and to guide empirical studies. However, the beginnings of some theory are emerging, and they are quite illuminating. Susan Rose-Ackerman (1980) and, more recently, Strumpf (1997) have taken two quite different formal approaches to policy innovation in a federal system. One insight emerging from their analyses is an important, if familiar and unsurprising, one. There exists a basic "information externality" in that states that adopt new and experimental policies generate valuable information for others. And this creates a standard sort of incentive for free-riding. From this perspective, we might expect too little experimentation and policy innovation in a highly decentralized public sector. Indeed, as Strumpf shows, it is unclear whether a centralized or decentralized outcome will result in more policy innovation.[23]

The underprovision of experimentation at state and local levels can be addressed through a system of subsidies to encourage these activities. And this raises another point regarding existing welfare reform in the U.S. Under earlier programs, federal aid took a matching form such that the federal government effectively shared the costs and risks of new state-level programs. But

[23] The Rose-Ackerman and Strumpf analyses, incidentally, also produce a number of subtle and more surprising results. Strumpf finds, for example, that a state with a higher expected return from experimentation can have a lower propensity to experiment.

under the new welfare reform measures, matching aid has been replaced by block grants. This in itself serves to reduce incentives for experimentation. There are some conflicting incentives here. On the one hand, the new legislation gives the states broader scope for experimentation, but it places the full cost of any new measures on the state with no sharing from the center. The net outcome on the amount of experimentation is thus a priori unclear.

More generally, we need a lot more work on the implications of fiscal decentralization for both the amount and kinds of policy experimentation and innovation. As I have suggested, there are some clear and important cases where innovation and experimentation at state and local levels have led to new policy measures that have had broad national application. But it is much less clear how we are to understand this experience in terms of the overall effectiveness of a federal system in policy innovation.

6. *Interjurisdictional Competition and Environmental Federalism: A Challenge to the Basic View*

The preceding sections have set forth an economic conception of a federal system. It is one in which the central government plays the major role in macroeconomic stabilization policies, takes the lead in redistributive measures for support for the poor, and provides a set of national public goods. Decentralized levels of government focus their efforts on providing public goods whose consumption is limited primarily to their own constituencies. In this way, they can adapt outputs of such services to the particular tastes, costs, and other circumstances that characterize their own jurisdictions.

The general idea of decentralizing the provision of public services to the jurisdictions of concern has been widely recognized. It manifests itself clearly on both sides of the Atlantic. We see it in Europe under the nomenclature of the "principle of subsidiarity," where it is explicitly enshrined in the Maastrict Treaty as a fundamental principle for European union. In the U.S., it often appears more informally as an aversion to the "one size fits all" approach.

Somewhat paradoxically, however, this view is the subject of a widespread and fundamental challenge both at the theoretical and policy levels. The source of this challenge is the claim that interjurisdictional competition among decentralized levels of government introduces serious allocative distortions. In their eagerness to promote economic development with the creation of new jobs (so the argument goes), state and local officials tend to hold down tax rates and, consequently, outputs of public services so as to reduce the costs for existing and prospective business enterprise. This results in a "race to the bottom" with suboptimal outputs of public services.[24]

This argument has a substantial history. Some thirty years ago, for example, George Break (1967) made the case for the detrimental effects of interjurisdictional competition:

> The trouble is that state and local governments have been engaged for some time in an increasingly active competition among themselves for new business . . . In such an environment government officials do not lightly propose increases in their own tax rates that go much beyond those prevailing in nearby states or in any area with similar natural attractions for industry . . . Active tax competition, in short, tends to produce either a generally low level of state-local tax effort or a state-local tax structure with strong regressive elements. (Break 1967, pp. 23–24).

[24] Competition may also take place between different levels of government. On such "vertical competition" (as well as horizontal competition), see Albert Breton (1998).

Fear of losing local business and jobs thus leads to suboptimal levels of state and local public goods. Such competition can involve regulatory as well as purely fiscal policies. John Cumberland (1979, 1981) has extended the Break argument to encompass the setting of standards for local environmental quality. In the Break spirit, Cumberland contends that state and local governments engage in "destructive interregional competition." In order to attract new business and create jobs, public officials compete by reducing local environmental standards to lower the costs of pollution control for firms that locate within their borders. In this instance, interjurisdictional competition leads to excessive environmental degradation. The implication of the Cumberland view is that national standards for environmental quality are needed to prevent the excessive levels of pollution forthcoming under state and local standard setting.

More recently, Alice Rivlin (1992) has echoed these views in her "rethinking of U.S. federalism." Although advocating an extensive devolution of public-sector responsibilities to state and local government, Rivlin sees it as almost axiomatic that competition among the states results in inadequate levels of public services. Her remedy is a system of shared taxes under which the revenues from a new national value-added tax would be shared among the states. This, she argues, would free the states so that they would not have "to worry so much about losing businesses to neighboring states with lower tax rates" (p. 142).

This line of argument has proved quite powerful in the policy arena. There are strong forces for the "harmonization" of fiscal and environmental measures in Europe that draw heavily on this proposition. Likewise, the case for the "race to the bottom" has provided basic support for the centralization of environmental management in the United States.

What I want to stress here is the fundamental character of this challenge to the basic model of fiscal federalism. The claim is that the decentralized provision of public services is basically flawed; in the words of one recent U.S. observer, we need centralization in order to "Save the States from Themselves" (Peter Enrich 1996).[25]

But is this claim in fact true? This turns out to be a very complicated question both in theoretical and empirical terms. There is now a substantial theoretical literature that addresses this issue. In one set of papers, my colleague Robert Schwab and I have developed a series of models that explore the conditions under which horizontal competition among governments is efficiency-enhancing (Oates and Schwab 1988, 1991, 1996). It turns out that it is straightforward to develop an analogue to perfect competition in the private sector. In such a setting, governments compete with one another for a mobile capital stock that both generates income for local residents and provides a tax base for them—and such competition leads local officials to adopt efficient levels of outputs of public goods and tax rates. In these models, the invisible hand works in much the same way as in the private sector to channel policy decisions in individual jurisdictions into an efficient outcome from a national perspective.

These models, moreover, are quite rich in terms of the variety of policy instruments. Public officials provide not

[25] There is, incidentally, a very extensive, interesting, and lively debate on this matter among legal scholars. Recent issues of the law journals are full of papers on interjurisdictional competition and its consequences. See, for example, Richard Revesz (1992) and Daniel Esty (1996).

only outputs for local residents, but public inputs that enhance the productivity of locally employed capital, and environmental regulations that impose costs on local business and improve local environmental quality. They finance these public outputs with a set of taxes on local residents and capital. And there is no race to the bottom here. Instead, jurisdictions find it in their own interest to charge benefit taxes that lead to efficient decisions in both the public and private sectors.[26]

The problem is that these models make some strong assumptions. Let me note three of them here: jurisdictions behave as price-takers in national or international capital markets; public officials seek in their decisions to maximize the welfare of their constituencies; and these officials have access to the needed fiscal and regulatory policy instruments to carry out their programs efficiently. It is not hard to show (or surprising to find) that violations of any of these conditions can lead to distorted outcomes. Suppose, for example, that local policy makers are Niskanen-type agents that seek to maximize, not the well-being of their constituencies, but rather the size of the local public budget. It is then straightforward to show that they will set excessively lax environmental standards in order to encourage a larger inflow of capital so as to enlarge the local tax base (Oates and Schwab 1988).

The Oates-Schwab models provide a kind of baseline from which one can introduce a range of quite plausible and realistic modifications that can be the source of allocative distortions. A large number of papers explore outcomes either where jurisdictions are sufficiently large to have some influence over the price of capital or where local governments are restricted in their access to policy instruments and must, for example, tax business and household capital at the same rate. Many of these papers employ game-theoretic approaches in which there is strategic interaction among the jurisdictions (Wildasin 1988). In such settings, we find that outcomes can easily occur that involve suboptimal levels of public outputs.[27]

The theoretical literature thus generates some diverse findings on this issue. There seem to be some basic efficiency-enhancing aspects of interjurisdictional competition, but there are clearly a range of "imperfections" that can be the source of allocative distortions. The real issue here is the magnitude of these distortions. Are we dealing with minor deviations from efficient outcomes—or does such competition produce major welfare losses? The pure theory can't help us much in answering this question. Moreover, some of the terminology is not very helpful. In particular, the description of interjurisdictional competition as involving a "race to the bottom" seems quite misleading. Such a descriptive image may well be an effective rhetorical device: it conjures up a vision of one jurisdiction cutting its tax rates and lowering its environmental standards, only to be outdone by a neighboring jurisdiction, in a process that leads to a downward spiral to the "bottom" (suggesting a very bad

[26] I should emphasize here that all public outputs (including environmental quality) are entirely local in these models; there are no spillover effects into other jurisdictions. The analysis, incidentally, extends not only to fiscal instruments, but regulatory ones as well (such as environmental standards). The analysis of "regulatory federalism" is, in principle, analogous to that of fiscal federalism. The same general principles concerning decentralization apply to fiscal and regulatory instruments.

[27] See John Wilson (1996) for an excellent survey of this literature.

outcome indeed). However, the models that generate these results are nothing of the sort. They are often game-theoretic models that produce Nash equilibria with suboptimal public outputs as the outcome. What matters here is the extent of the suboptimality. And the race-to-the-bottom terminology tends to obscure this issue.

Unfortunately, we do not have many empirical studies to bring to bear on this matter. There is a substantial descriptive literature addressing economic competition among state and local governments in the U.S., with some interesting findings (Timothy Bartik 1991). But this body of work really does not shed much light on the normative question of whether such competition is efficiency-enhancing or not (Paul Courant 1994). In an interesting study that is of relevance, Anne Case, James Hines, and Harvey Rosen (1993) find evidence of strategic interaction in state-level fiscal policies. Using a similar methodology, Jan Brueckner (1998) finds empirical support for policy interdependence in the adoption of growth-control measures by local governments in California. But at this juncture, I think it is fair to say that the jury is still out on this matter. The welfare implications of interjurisdictional competition remain the subject of a lively ongoing debate with a real need for further empirical work to supplement the large theoretical literature. In my own view, the existing work is not sufficient to make a compelling case for the abandonment of (or basic amendment to) the principle of fiscal decentralization. The case remains strong, it seems to me, for leaving "local matters in local hands." Moreover, as we shall see shortly, there is another literature that takes a very different (and unambiguously positive) view of the role of interjurisdictional competition.

7. *Fiscal Federalism: Expanding the Scope of the Analysis*

The normative framework for most of the literature in fiscal federalism (and for my treatment in this essay as well) consists of the traditional principles of welfare economics. From this perspective, institutions are evaluated in terms of their impact on efficiency in resource allocation and the distribution of income. However, the choice of a system of governance involves other values as well: the extent of political participation, the protection of individual rights, and the development of various civic virtues. Political theorists throughout the ages have explored the ways in which different political systems address these various objectives of the polity. In addition, the vertical structure of government may have important implications for the way in which the public sector functions and its impact on the operation of a system of markets. In this section, I want to explore some of the new (and older) literature that addresses some broader implications of fiscal federalism.

7.1 *Economic and Political Objectives in a Federal System*

The first issue involves extending the conceptual horizon to encompass additional political objectives. What might this add to our more narrowly focused economic view of fiscal federalism? Inman and Rubinfeld, in one strand of their important new work on fiscal federalism, have (and are) exploring this issue in an attempt to redefine and extend the analytical framework to encompass some of these additional political and constitutional dimensions of public-sector structure.

The approach of Inman and Rubinfeld (1997a,b,c) incorporates explicitly certain political goals into a more extended objective function. In such a setting, we find ourselves examining tradeoffs between such goals as economic efficiency and political participation. In one such illustration, they present a "federalism frontier" in which (over the relevant range) increased political participation comes at the expense of economic efficiency (1997a, p. 1230).

The basic presumption here is that more decentralized political systems are conducive to increased citizen impact on political outcomes and political participation. The evidence on this issue, in truth, is somewhat mixed, but overall it suggests on balance "that both citizen influence and effort increase as the size of government declines" (1997a, p. 1215). The basic political objectives thus strengthen the case for increased decentralization; they point to a system that is more decentralized than one chosen simply on the grounds of an exercise in economic optimization.

While this is suggestive at a general level, it raises the more difficult question of how one addresses these tradeoffs in the actual design of fiscal institutions. How, for example, can we define and measure in a meaningful way the marginal rate of substitution between economic efficiency and political participation and incorporate this into the design of a political system? To approach this question in a substantive way requires the study of more specific issues. And here Inman and Rubinfeld (1997a) provide a provocative beginning with a careful study of "anti-trust state-action doctrine." This involves an intriguing series of Supreme Court decisions in which state programs, that—had they been designed and introduced by producers themselves, would have constituted a violation of anti-trust laws—were upheld on the basis of state legislative sovereignty. Although the history of this doctrine is a complicated one, it is interesting that the Court has seen fit to set aside, in certain instances, the presumed economic consequences of certain state regulations in favor of decentralized political choices, so long as they "were decided by an open, participatory political process, as evidenced by state legislative involvement" (1997a, p. 1252).

It seems unlikely that we can ever hope to quantify such tradeoffs in a formally satisfying way. But the Inman-Rubinfeld work does suggest that careful analysis can certainly help to clarify the nature of the tradeoffs involved in the vertical design of the political system and allow economics to play a broader role in the debate. It is interesting, moreover, that the political objectives seem, on the whole, to strengthen the case for fiscal decentralization.

7.2 *Public-Sector Institutions: Market-Preserving Federalism*

An alternative approach to federalism, related to the "new institutional economics," sees political decentralization in terms of its capacity to sustain a productive and growing market economy. From this perspective, Barry Weingast (1995), Ronald McKinnon (1997a), and their colleagues have explored the institutional structure of a system that promises to provide a stable framework for a market system (see also McKinnon and Nechyba 1997 and Qian and Weingast 1997). Weingast's point of departure is a "fundamental political dilemma of an economic system," namely that "a government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens" (1995, p. 1).[28]

The attraction of federalism for Weingast is its potential for providing a

[28] However, as Martin McGuire and Mancur Olson (1996) have shown, even a self-aggrandizing autocrat (if secure) has powerful incentives for supporting an economically efficient system.

political system that can support an efficient system of markets. In a provocative treatment, Weingast lays out a set of three conditions for a federal system that characterize what he calls "market-preserving federalism." These conditions require that (1) decentralized governments have the primary regulatory responsibility over the economy; (2) the system constitutes a common market in which there are no barriers to trade; and (3) decentralized governments face "hard budget constraints." By this last condition, Weingast means that lower-level governments have neither the capacity to create money nor access to unlimited credit. And it implies further that the central government does not stand ready to bail them out in instances of fiscal distress.

Weingast goes on to argue in historical terms that eighteenth century England and the United States in the nineteenth century were effectively such systems of market-preserving federalism, and that this fostered in important and fundamental ways the process of economic growth. It proved critical, argues Weingast, to the industrial revolution in England and supported a system of "thriving markets" in the United States throughout the nineteenth century.

McKinnon (1997a) has explored in more detail the importance of Weingast's last condition of a hard budget constraint. Crucial to this view is the separation of monetary and fiscal powers. In a federal system, if the central government controls the common currency, then lower-level governments will be limited to fiscal instruments and will not have access to the "soft" option of monetized debt. As McKinnon points out, state and local governments in the United States engage in extensive debt finance for capital projects. This makes good economic sense in terms of spreading the payments for long-lived capital projects over their useful life. But they have no recourse to public sources for funding this debt; they operate in private credit markets just like private borrowers. These markets themselves, through the determination of credit ratings and other forms of monitoring fiscal performance, create an environment in which the fiscal authorities must behave in responsible ways.[29] These markets, by creating a hard budget constraint in terms of debt finance, have imposed a very useful discipline on decentralized fiscal behavior.[30]

More generally, a hard budget constraint implies that decentralized governments must place a basic reliance on their own sources of revenues. They must not be overly dependent on transfers from above. I discussed in an earlier section the potential role for intergovernmental grants, but Weingast and McKinnon (as well as others) remind us of the important discipline that stems from self-financing. It is especially important that intergovernmental grants not be expansible in the sense that recipients can turn to the grant system to bail them out of fiscal difficulties (Wildasin 1998b). In particular, public authorities need to fund their own expenditures at the margin.[31]

The institutional perspective reminds us that there is more to the design of a

[29] James Poterba and Kim Rueben (1997), for example, have found that those states with tighter anti-deficit rules, and more restrictive limitations on the authority of the state legislature to issue debt, pay lower rates of interest on their bonds.

[30] McKinnon (1997b) has gone on to argue that much of the impetus for European Monetary Union has as its source a collectively imposed budgetary retrenchment. His interesting argument is that European decision makers, realizing that they cannot achieve fiscal stability with continued access to monetary powers, are seeking through EMU to create the hard budget constraints that are the prerequisite for responsible fiscal management.

[31] This is subject to the qualification that matching grants may be needed to internalize interjurisdictional spillover benefits.

federal fiscal system than just the allocation of functions to the appropriate levels of government. In addition, we need sets of formal and informal institutions that embody the rights sorts of incentives for public decision makers (Olson 1990). These rules or procedures must make the costs of public programs as fully visible as their benefits in ways that make public officials accountable for their decisions (Shah 1998).

The treatment of fiscal structure in this section is not unrelated to Geoffrey Brennan and James Buchanan's (1980) view of fiscal decentralization as a mechanism for controlling the size of the public sector. Drawing by analogy on the conventional theory of monopoly in the private sector, they envision the government sector as a monolithic agent, a "Leviathan," that seeks its own aggrandizement through maximizing the extraction of tax revenues from the economy. From this perspective, the design of the constitution and associated institutions has as a major objective the placing of a set of constraints that limits Leviathan's access to tax and other fiscal instruments. Fiscal decentralization can, in their view, play a most important role in constraining public sector growth. Competition among decentralized governments for mobile economic units greatly limits the capacity of Leviathan to channel resources into the public sector. As Brennan and Buchanan put it, competition among governments in the context of the "interjurisdictional mobility of persons in pursuit of 'fiscal gains' can offer partial or possibly complete substitutes for explicit fiscal constraints on the taxing power" (1980, p. 184).[32]

[32] In a more formal treatment of this matter, Dennis Epple and Allan Zelenitz (1981) have shown that while competition among jurisdictions can constrain government rent-seeking behavior, it cannot altogether eliminate it.

The Brennan-Buchanan view suggests the hypothesis that the overall size of the public sector "should be smaller, ceteris paribus, the greater the extent to which taxes and expenditures are decentralized" (1980, p. 185). The evidence on this hypothesis is, however, at best mixed. For example, I was unable to find any systematic relationship between public-sector size and the extent of fiscal decentralization (Oates 1985). However, some later and more disaggregated studies have found some tendencies of this kind (See Oates 1989 for a survey of this work.).

More generally, there is not much evidence on the relationship between fiscal decentralization and economic performance. But there is some. Jeff Huther and Anwar Shah (1996) at the World Bank have assembled a large and diverse set of indices for eighty nations. These indices encompass a wide variety of measures of economic and political structure and performance: quality of governance, political freedom, political stability, debt-to-GNP ratios, measures of income, the degree of equality in the distribution of income, and many more. In examining the statistical associations among these various indices, they find in nearly every case a statistically significant and positive correlation between increased decentralization and improved performance (either in political or economic terms). There are obvious and important qualifications here. Such associations do not prove causation. In particular, the degree of fiscal decentralization is itself the outcome of a complex of political and economic forces. Nonetheless, the initial results are suggestive and invite further exploration. Elsewhere, Sang-Loh Kim (1995) in an intriguing econometric study making use of an international panel data set, has estimated a Barro-type growth model. In addition to the usual explanatory variables, he included a measure of fiscal decentralization that, in most of his estimated equations, has a significant and positive partial association with the rate of economic growth. Kim's findings thus support Shah's contention that fiscal decentralization enhances economic performance—in this case, more rapid economic growth. In contrast, Heng-fu Zou and his colleagues have found a negative relationship between economic growth and fiscal decentralization in two studies, one examining a sample of forty-six countries over the period 1970–89 (Davoodi and Zou 1998) and the other a study of the growth of provinces in China (Zhang and Zou 1998). Much obviously remains to be done at the empirical level in order to give us a better sense of the relationship of fiscal decentralization to economic and political performance.

There is also much more to do at the conceptual level. While Weingast's initial forays into market-preserving federalism are certainly provocative, they raise at least as many questions as they answer. It is fair, I think, to characterize the analysis as fairly "loose" at this stage. For example, are Weingast's conditions for market-preserving federalism to be regarded as necessary or sufficient (or both) for an effective political foundation for a private market economy? Jonathan Rodden and Susan Rose-Ackerman (1997) have raised a number of probing questions concerning the Weingast analysis. There is clearly much to chew on here. The next step, it seems to me, is to attempt to formalize these relationships more explicitly so as to get a better sense of how different political and budgetary institutions influence the functioning of a market system.

Finally, it is impossible to leave this section without noting an obvious irony that has no doubt occurred to the reader. In the earlier section on interjurisdictional competition, the central concern was that such competition leads to too little in the way of public outputs. There it was argued that competition for new firms and jobs may lead to public budgets that are too small, and to overly lax environmental standards. In contrast, the thrust of this section has been on the beneficial effects of competition as a disciplining force that restrains the tendencies in the public sector towards excessive spending and other forms of fiscal misbehavior. One's view of the role of intergovernmental competition clearly depends on how one views the operation of the public sector more generally!

8. *Fiscal Decentralization and Economic Development*

When examining international cross-sectional data on intergovernmental structure, one is immediately struck by the sharp contrast in the extent of fiscal decentralization in the industrialized and developing countries. In a study of my own involving a group of forty-three countries (Oates 1985), the sample statistics revealed an average share of central-government spending in total public expenditure of 65 percent in the subsample of eighteen industrialized countries, as contrasted to 89 percent in the subsample of twenty-five developing nations. In terms of total public revenues, the central-government share for this same subsample of developing countries was over 90 percent!

Although there are real concerns with the accuracy of some of these fiscal data (Richard Bird 1986), the general presumption that the developing countries are characterized by relatively high degrees of fiscal centralization seems firmly grounded. And this, moreover, is not something new. Writing over forty years ago, Alison Martin and W. Arthur Lewis (1956) noted that "the weakness of local government in relation to central government is one of the most striking phenomena of under-developed countries" (p. 231).

What are we to make of this? Some observers attribute the poor economic performance of many of the developing countries in large measure to the failure of central planning and make a strong case for the devolution of fiscal responsibilities. But the issue is clearly more complicated than this. In particular, the question arises as to whether fiscal decentralization is a cause or a result of economic development. Roy Bahl and Johannes Linn (1992), for example, argue that as economies grow and mature, economic gains from fiscal decentralization emerge. As they put it, "Decentralization more likely comes with the achievement of a higher stage of economic development" (p. 391); the "threshold level of economic development" at which fiscal decentralization becomes attractive "appears to be quite high" (p. 393). From this perspective, it is economic development that comes first; fiscal decentralization then follows. But not all would agree. More generally, it seems to me, we must regard intergovernmental structure as part of a larger political and economic system that both influences and is determined by the interplay of a variety of political and economic forces. It may well be that fiscal decentralization itself has a real contribution to make to improved economic and political performance at different stages of development.

To gain further insight into this issue, we might turn to the historical experience of the industrialized countries and examine the course of fiscal decentralization through extended periods of economic growth. This, in fact, does not prove to be very helpful. If we look at the United States, for example, we find that in the late nineteenth century the public sector was both very small and highly decentralized. At the turn of the century, the public sector accounted for only about 8 percent of GNP in the U.S., while the central-government share of total public expenditure was around 30–35 percent. By 1955, the central-government share of public spending had roughly doubled from one-third to two-thirds.[33] The fiscal records of other industrialized nations like Great Britain reveal roughly similar patterns.

The point is that the trend over this period of economic growth was *not* one of increasing fiscal decentralization; it was just the reverse! It is worth noting, however, that these centralizing tendencies seem to have played out around the middle of the century. For most of the industrialized countries, fiscal centralization ratios appear to have peaked in the decade of the 1950's, and since that time, they have actually declined slightly in most cases (Oates 1978; Werner Pommerehne 1977). What typically seems to be taking place is a complicated process of intergovernmental evolution. We see efforts at devolution in a number of OECD countries accompanied, at the same time, by the emergence of a new top layer of government in the European Community.

But all this may not have much relevance for the developing nations. This is because they have a very different starting point for the growth process. As Diana Conyers (1990) stresses, "Most less developed countries inherited relatively centralized systems of governments from their colonial powers, and in the first years of independence there

[33] See John Wallis and Oates (1997) for a description and analysis of the evolution of American federalism in the twentieth century.

was often a tendency to maintain—if not strengthen—central control and centralized systems of planning, in order to encourage a sense of national unity and reinforce the new government and its policies" (p. 16). Thus, many of these countries entered upon nationhood with highly centralized government sectors; they have not undergone anything like the process of public-sector evolution experienced in the industrialized countries.

The implication of all this is that the potential of fiscal decentralization for improving economic and political performance must be evaluated in terms of the specific circumstances that characterize the current state of a developing nation. There remains, in my view and that of some others (Shah 1994), a strong case on traditional grounds for a significant degree of decentralization in public-sector decision-making in the developing nations. This case, as we have discussed, rests both on the potential economic gains from adapting levels of public outputs to specific regional or local conditions and on the political appeal of increased participation in governance. The economic case has been made formally in purely static terms (as noted earlier in the treatment of the Decentralization Theorem), but it may well have some validity in a dynamic setting of economic growth. Development policies that are sensitive to particular regional or local needs for infrastructure and even human capital are likely to be more effective in promoting economic growth than are centrally determined policies that largely ignore these geographical differences. There exists, incidentally, no formal theory of fiscal decentralization and economic growth; it might be useful to set out such a theory, for a framework that incorporates jurisdiction-specific investment programs might provide some insights into the parameters on which improved growth performance depends.[34]

The prescriptive literature on fiscal structure for the developing countries harks back directly to several of the points made in the preceding sections. In particular, there is a heavy emphasis on reliance on own finance in order to create hard budget constraints. This can have special relevance in the developing-country context, where decentralized governments often have very limited access to their own major sources of tax and other revenues and are heavily dependent on transfers from above. In some instances, provincial or state governments may even have access to the public banking system to absorb their debt issues. This predictably leads to large budgetary deficits and both fiscal and monetary instability.

This literature makes reference to the problem of "vertical imbalance," meaning a disparity between different levels of government in their expenditure commitments and their access to revenues. Although the concept suffers from certain ambiguities, it does focus attention on the important issue of the widespread inadequacy of revenue sources at decentralized levels of government. The often heavy reliance of provincial, state, and local governments on transfers from above undercuts incentives for responsible fiscal decision-making; fiscal decisions become outcomes of politically driven negotiations between central and "local" authorities, not the result of weighing benefits and costs of prospective public programs.

The case for establishing adequate

[34] Some observers, like Remy Prud'homme (1997), argue that the case for fiscal decentralization has been much exaggerated. Prud'homme claims that many of the premises of the fiscal federalism vision are typically not satisfied in the developing-country setting; decentralized government bodies, he argues, are frequently unresponsive to the needs of their constituencies and manifest widespread corruption.

and effective tax systems at decentralized levels of government is one of the critical issues of fiscal federalism in the developing world. And it is a truly challenging problem (Bahl and Linn 1992; Bird 1992). The earlier section dealing with the tax-assignment problem set forth some of the properties of "good" taxes at decentralized levels of government. But provincial and local governments in developing countries often face serious obstacles to the use of these tax bases. The scope, for example, for using local property taxes is circumscribed in many instances by the absence of the requisite institutions for tax administration. As Bahl and Linn (1992) point out, there is typically more potential for such taxes in urban than in rural areas in most developing countries. The obstacles are real, but there are ongoing and extensive efforts to build up the administrative capacity for more effective revenue systems.

Fiscal reform efforts in the developing world thus must focus on (1) Restructuring systems of intergovernmental grants, in some instances to reduce the extent of financing that they provide to decentralized levels of government, and, more generally, to remove the perverse incentives that they often embody for fiscal behavior on the part of recipients; (2) Redesigning revenue systems so as to provide decentralized levels of government a much expanded access to own-revenues to finance their budgets and thereby reduce their dependence on transfers from above; and (3) Reviewing the use and restrictions on debt finance to ensure that debt issues are not a ready way to finance deficits on the current account. All three of these avenues of reform contribute in important ways to the establishment of a hard budget constraint, but one that permits decentralized levels of government to do their job. Finally, running through all these dimensions of fiscal reform is the crucial attention to fiscal decision-making institutions and procedures themselves to introduce mechanisms that provide incentives for public officials to act in the public interest; this means largely, as Shah (1998) stresses, establishing channels for accountability.[35] In the interim, provincial and local governments cannot be left to fend entirely for themselves; depending on the specific circumstances, there will often be a need for significant transfers from the center, especially to impoverished jurisdictions. But the general direction of needed reform seems clear.

The ongoing efforts to decentralize the public sectors of former socialist states encounter much the same set of issues. But the problems are in some ways even more complicated, inasmuch as the process of decentralization is going on alongside a process of privatization; the complicated and sometimes chaotic transition from a command economy to a market system does not provide a stable environment within which to restructure the public sector. Nevertheless, a comprehensive process of fiscal decentralization is underway in much of Central and Eastern Europe, and it involves the same issues of defining the fiscal responsibilities of the different levels of government and introducing the fiscal instruments and procedures needed both to support emerging private markets and to deliver needed public services (Bird, Ebel, and Wallich 1995).

9. *Some Concluding Observations*

The evolution of the vertical structure of the public sector continues in

[35] See Govinda Rao (1998) for an illuminating treatment in the Indian context of the wide range of mechanisms (or "subterranean transfers" as he calls them) through which central government subsidizes the states.

interesting and novel ways. As I noted earlier, the first half of the twentieth century was characterized by a strong trend toward increased fiscal centralization. Indeed, some acute political observers in the nineteenth century forecast this trend. Tocqueville, writing in the first half of the nineteenth century, predicted that "in the democratic ages which are opening upon us . . . centralization will be the natural government" (1945, Vol. II, p. 313). And nearer the end of the century, Lord Bryce reiterated this forecast (at least for the U.S.). After reviewing both the "centrifugal" and "centripetal" forces at work in American government, Bryce concluded that while the centrifugal forces were "likely, as far as we can see, to prove transitory . . . the centripetal forces are permanent and secular forces, working from age to age" (1901, Vol. II, p. 844). Bryce then proceeded to forecast that " . . . the importance of the States will decline as the majesty and authority of the National government increase" (1901, Vol. II, p. 844). Later, Edward McWhinney (1965) went on to generalize all this to what he calls "Bryce's Law," the proposition that " . . . federalism is simply a transitory step on the way to governmental unity" (p. 105).

But such forecasts have not been borne out. The second half of the twentieth century has seen the extent of centralization in most of the industrialized countries reach some sort of peak with a modest swing back in the direction of devolution of public sector activity. There are, as Bryce suggests, important forces working in both directions, and one can expect the net effect to move in different directions as nations evolve over time.

What does seem to be taking place is a growing complexity and specialization in the vertical structure of the public sector. Recent decades have seen the creation of special districts to provide particular public services and the formation of metropolitan area governments to bring center cities and their suburbs into a single jurisdiction (again for purposes of addressing specific needs such as transportation and housing). It is especially striking to witness in the European Community the moves toward devolution in many member countries, while, at the same time, the Community develops a set of supranational institutions for governance and economic management. Other countries, like South Africa and the former socialist states, are struggling with their own sets of pressing issues in their attempts to find effective mechanisms for political and fiscal decentralization.

While the existing literature in fiscal federalism can provide some general guidance on these issues, my sense is that most of us working in the field feel more than a little uneasy when proffering advice on many of the decisions that must be made on vertical fiscal and political structure. We have much to learn!

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