

DOES EFFICIENCY SHAPE THE TERRITORIAL STRUCTURE OF GOVERNMENT?

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Abstract

This paper reviews the literature on public goods in relation to the following three questions. Why is government organized across multiple levels? Does efficiency determine the level at which decisions are made? Does efficiency frame how policy problems are bundled in jurisdictions? Rather than examine how government structure may or may not lead to efficient outcomes, this essay is concerned with how efficiency constrains government. Rather than explain variation in government, the concern here is to probe some fundamental commonalities in government structure. Such commonalities are sometimes taken for granted precisely because they appear to be constants in an otherwise fluctuating political universe.

Presented at 11th Biennial International Conference of the European Union Studies Association, Los Angeles, California * April 23-25, 2009.

Does efficiency shape the territorial structure of government? Public choice theorists have long debated whether it is possible to identify an efficient structure of government. Those who believe that it *is* possible come to different conclusions about what efficiency entails. Some, following Oates (1972), argue that decentralization is efficient for local public goods because local provision can cater to heterogeneous preferences; others frame the question in terms of jurisdictional competition (Tiebout 1956); and yet others make informational arguments (Hayek 1945). Each line of argument is contested by those who claim that central government can do all that local government can do, or that the purported benefits of decentralization depend on contextual factors — corruption, skill, moral hazard—that may or may not favor local decision making (Rodden 2005; Treisman 2007). But even if one could agree on the virtues and vices of different government structures, political scientists would be quick to point out that government is shaped by factors that have nothing to do with efficiency. In the first place, government has distributional consequences that may shape its structure: dictators centralize authority because they wish to constrain or eliminate political opponents; rich regions strive for greater fiscal autonomy, poor regions for greater central control; republicans favor decentralization under democratic administrations, and democrats under republican administrations. Then there is the powerful force of identity and the corresponding demand for self-rule on the part of groups who share distinct cultures or languages. Basque nationalists demand a separate state irrespective of its effect on taxes; the British independence party campaigns to pull out of the European Union even though this would impose a serious economic cost. Psychologists tell us

that the human need for belongingness has little or no connection to efficiency (Baumeister & Leary 1995).

Yet, it may be premature to dismiss efficiency as a cause of government structure. This review asks three fundamental questions. Why is government organized across multiple levels? Does efficiency determine the level at which decisions are made? Does efficiency frame how policy problems are bundled in jurisdictions? These topics have generated debate on the implications of particular government structures. Here we turn the question around. Rather than examine how government structure may or may not lead to efficient outcomes, this essay is concerned with how efficiency constrains government. Rather than explain variation in government, the concern here is to probe some fundamental commonalities in government structure. Such commonalities are sometimes taken for granted precisely because they appear to be constants in an otherwise fluctuating political universe.

CONCEPTUALIZING EFFICIENCY AND ITS EFFECTS

The view that an institution is shaped by considerations of efficiency requires, in the words of March & Olsen, a “logic of expected consequences” in which decision makers choose among alternatives by evaluating their effects for individual and collective objectives (1998: 949). The view that the territorial structure of government is driven by efficiency has been subject to several criticisms.

First, there is no single dimension that captures the structural efficiency of government, and hence the implications of efficiency for the structure of government

involve trade-offs. It therefore becomes implausible to conceive of efficiency as dictating a uniquely efficient government structure.

Textbox 1 lists three kinds of efficiency. Pure or *technical efficiency* is the simplest conception; it refers to the idea that a policy should be decided by the government that is able to produce the policy at the lowest cost and to encompass all individuals experiencing positive or negative effects of that policy. Pareto-optimal or *allocative efficiency* expresses the notion that government structure should also be responsive to the heterogeneous preferences of individuals. However, since individuals have policy preferences over many dimensions, there may be more than one jurisdictional design that is pareto optimal. *Interjurisdictional efficiency* is concerned with the cost of coordinating policy making among governments. These costs can be reduced by limiting the number of government levels, and therefore the number of governments that negotiate with each other, or by limiting the overlap between the functions carried out by individual jurisdictions.

[Textbox 1 about here]

Second, it is implausible to conceive the competitive pressures that efficiency gives rise to as being decisive for survival. The cost of inefficiency in the structure of government is waste of resources or the imposition of homogeneous policies on heterogeneous populations, hardly the kind of existential pressures that are normally associated with the weeding out of inefficient alternatives in an evolutionary process.

Third, available knowledge concerning the implications of alternative structures for economic and political goods stresses the complex and conditional character of the relevant causal effects. One of the most cited virtues of decentralization is that

competition among local governments reproduces some benefits of market competition, including policy experimentation among competing governments, greater responsiveness to local demand for services, and the opportunity for citizen consumers to vote with their feet by moving to the locality of their choice (Oates 1972, Tiebout 1956, Weingast 1995). The argument assumes that citizens have sufficient information about the quality of public services, that they know which level of government provides what, that governments do not “overfish” in the common tax pool, and that the expertise of local officials is not worse than national officials. Whether these assumptions hold, and how robust the argument is when they do not, is a matter of debate (Dowding et al. 1994, Lowery et al. 1995, Lyons et al. 1992, Panizza 1999, Treisman 2007, Wibbels 2006). “[W]hile the theoretical case for decentralization is relatively straightforward, the practical case may be less so” (Tanzi 1996: 300).

Whether a particular structure of government is locally optimal or suboptimal is likely to depend on the context. Economic growth is an interesting dependent variable in this respect: it can be measured quite accurately and the search for optimality has been more sustained on this topic than any other. The first premise of this research was to explore whether the presumed beneficial consequences of fiscal decentralization in the United States could be generalized to other countries. The short answer is no. Surveying empirical studies since 1995, Breuss & Eller conclude that “Ambivalent effects are at work; clear recommendations regarding the optimal degree of decentralisation are difficult to draw” (2004: 7). If there is a robust conclusion, it may be that, in general, fiscal decentralization has a better chance of producing growth in developed than in developing countries. A recent summary concludes that, “Federalism

in developing countries . . . is systematically associated with mismanagement, overspending, and market failures . . . At the other end of the spectrum, advanced federations, such as the USA or Switzerland, are vindicated as illustrations of the positive effects of federal institutions" (Beramendi 2007: 763). The benefit of fiscal decentralization for economic growth appears to depend on per capita GDP (Davoodi & Zou 1998, Thießen 2000, Woller & Phillips 1998), a unitary vs. a federal system (Inman 2008, Yilmaz 1999), limited opportunities for local rent seeking (Cai & Treisman 2004, Desai et al. 2003), centralization of large infrastructural projects (Zhang & Zou 2001), and, perhaps most importantly, whether subnational governments are constrained to fund spending through own taxes (Rodden 2005, Rodden & Wibbels 2002). In some contexts, fiscal decentralization has increased economic growth, constrained government spending, and enhanced accountability; in others, it has decreased economic growth and has led to structural fiscal deficits, and intense competition for central government transfers (Beramendi 2007, Treisman 2007, ch. 11, Wibbels 2006).

These criticisms suggest that it is fruitless to seek uniquely optimal structures of government. Structures that are efficient under a given combination of conditions may be inefficient under others. The conditions that determine whether a particular structure is efficient may be difficult to change if they exhibit institutional complementarities (March & Olsen 1998: 955, Pierson 2004: 149-150). The state of Bremen in Germany contains two towns about 60 kilometers apart, both enclaves within the state of Lower Saxony. No social planner could dream up such an arrangement, yet attempts to combine the two states have foundered on identities, institutions, and interests that have evolved in tandem with historical borders. The territorial shape of governments is,

in almost every case, historically rooted, and this gives rise to path dependencies that resist convergence to single optima.

If efficiency shapes government, it is therefore within an historical frame. This has two analytical implications. First, efficiency is likely to be evidenced most clearly in negation, in the elimination of options that are grossly inefficient over a range of historical conditions. Although efficiency is unlikely to lead to unique outcomes, it may therefore narrow consideration sets in a way that can be empirically detected. Second, efficiency may be evidenced most clearly in aggregation. While it is infeasible to point-predict, it may be possible to detect efficiency in a probabilistic manner by examining a range of cases where the effects of divergent, historically conditioned, contexts offset each other to some extent.

WHY IS GOVERNMENT DISPERSED ACROSS MULTIPLE LEVELS?

Government in civilized societies has never operated at a single level. Large countries, both today and historically, have had several layers of subnational government.¹ Small countries usually have a level of government beneath the state and

¹ The Inca Empire, which in the fifteenth century had a population of between five and eleven million, had a hierarchical, multilevel system of government. Cusco, in modern eastern Peru, was the seat of government, and the territory was divided in four quarters or provinces under the leadership of a prefect, usually a close blood relative of the Inca emperor. Below them were provincial governors who oversaw the leaders of ethnic groups in their province. Each province was further subdivided by a factor of ten into progressively smaller units. Serving under each governor were ten *kurakas*, each of

one or more above. The number of government levels for most people living today is between three and seven, of which between one and five exist within their national state and one or two beyond the national state at a regional or global scale.

Textbox 2 represents these levels for Tianhe-Guangzhou-Canton-China, Echternach-Luxembourg, and Chapel Hill-North Carolina-United States. Each data point represents a level of government from the local to the United Nations. Country size varies greatly: China has five levels of government below the national state, and just one above; Luxembourg has three below and three above. However, in both countries, as in the United States, the scale of government, measured in population, can be described as a sequence of exponential jumps. The jurisdictional axis summarizes the slope across levels.

[Textbox 2 about here]

The simplest explanation for this pattern is informational. A multilevel structure is an efficient response to the impossibility of communicating with a large number of people simultaneously. By sending a message to a limited number of persons, who each send the message on to a similarly limited number of persons, and so on, a single person (or government) can communicate with a vast number of individuals in a few

whom ruled over a district containing about 10,000 peasants. Another official, ideally a leader of a large village, ruled over a smaller area containing about 1,000 peasants. At the level below, ten foremen each supervised 100 peasants. At the lowest organizational level, an official oversaw a group of ten peasants. While there were deviations, the decimal system provided the basis for government (Patterson 1992: 77-85).

steps. The same logic applies to receiving messages if it is not possible for a single individual to process a very large number of messages simultaneously. The efficient number of steps, or levels, will depend on the number of messages that an individual can simultaneously send or receive, economies of scale in bundling messages, the time it takes to send or receive a message, and the extent to which information is lost or garbled in communication (Treisman 2007: 209-22).

If efficiency determines the number and spacing of government levels, and the parameters listed above are invariant to scale, the points in the figures would lie exactly on the jurisdictional axes. Clearly they do not. The population size of countries tends to depart most radically from the jurisdictional axis. In the figures above, Luxembourg is “too small” and the United States is “too large” in relation to the governments above and below. The reason for this is that the size of countries is mainly determined by distributional factors, in particular, geopolitics and war (Cederman 1997, Lake & O'Mahoney 2004, Tilly 1992).

Distributional factors appear to be less powerful in determining the structure of government within states. While it is true that dictators seek to centralize power, all rulers need to have a system of spatially deconcentrated intermediaries who collect information, convey rules, and monitor compliance. A nested hierarchy of governments encompassing exponentially increasing populations is a solution to this problem that is largely independent from distributional conflict about the allocation of values. The contrast with regime type is striking. Theoretical and empirical analyses converge in the view that democracies are more efficient than dictatorships in providing values for their populations, but they also conclude that efficiency is a weak force in producing regime

change (North 1990: 109). Type of government—unlike its territorial structure—powerfully reflects distributional considerations that impede efficient outcomes.

The chief constraint on efficiency within states arises from the prior existence of independent regions. States composed of pre-existing states have much greater variation in the size of constituent units than states in which subnational government is introduced from above. Variation in the population of top-tier subnational units is correspondingly much greater in federal regimes, such as the United States, Germany, Switzerland, or Russia, than in unitary regimes such as France, England, or Portugal.

Unitary schemes often come to nothing in the face of historical regions. Territorial identities embedded in distinctive cultures are astonishingly durable, especially when they are rooted in language. In Spain, pre-Napoleonic Basque and Catalan regions were reintroduced in the late 1970s after more than a century of suppression. From Napoleon to Franco, centralizing regimes imposed a top-down, rationalist structure that fragmented linguistic regions into equally sized provinces, a project that was finally broken by the mobilization of regional communities along pre-Napoleonic lines (Lecours 2001, Marti-Henneberg 2005).

The concept of the jurisdictional axis provides a partial view because it does not convey what is done where, but it conveys the notion that government from the local to the global level is a coherent phenomenon. This echoes efforts by international relations scholars and comparativists to build conceptual bridges across the international/domestic divide (Enderlein et al. 2008, Kahler & Lake 2003, Keohane & Ostrom 1995, March & Olsen 1998). It also reflects some profound developments in jurisdictional architecture, particularly in Europe, which has spawned concepts –

Mehrebenensystem, multi-layered, multi-centered, and multilevel governance – that encompass government from the local to the global (Bache & Flinders 2004, Benz 2003; Hooghe & Marks 2001, 2003, Kohler-Koch & Eising 1999, Leibfried & Pierson 1995, Marks 1993, Sbragia 1993, Scharpf 1997). The premise, which was always implicit in public choice theory, is that the structure of government within and among states reflects contrasting circumstances, rather than different causal logics. Although European integration engages relations among states, the issues are similar to those posed about the pros and cons of fiscal decentralization within states (Tanzi 1996: 296). "From an economic viewpoint there is nothing special about the point on the spectrum called the 'nation'. Some activities might best be assigned to that level of government but certainly not all. The crucial issue is to identify which level of decentralization is appropriate for each kind of activity" (Wildason 1996: 325).

DOES EFFICIENCY REQUIRE DECENTRALIZATION?

According to public goods theory, the purpose of government is to supply goods that would not be provided spontaneously by rational individuals because it is impractical to confine use of the good to those who pay for it and because those who use the good do not diminish its utility for others. Security is such a good, and Thomas Hobbes argued that it is necessary to contract a Leviathan to supply it. The Leviathan monopolizes authority in order to negate the disastrous consequences of faction.

Hobbes believed that division of authority was incompatible with security, and security was the basis for government activity.²

Contemporary public choice analysis comes to almost the opposite conclusion, for it assumes that government provides diverse public goods in addition to security. Efficient jurisdictional design requires a) minimizing positive and negative externalities leading to the undersupply or oversupply of the public good, b) exploiting scale economies in the provision of the public good, and c) tailoring policy to the heterogeneous preferences of those living in different communities (Musgrave 1959, Oates 1972, 2006). Since these vary across public goods, the implication is that government should be multilevel.

Whether this means that *authority*—the legitimate exercise of political power—should be dispersed is another matter. If each citizen wanted the same basket of goods, it might not matter if decision making were uniform, but if tastes differ from one locality to another, uniform decision making would produce suboptimal goods (Besley & Coate 2003, Rubinchik-Pessach 2005). Theoretically, it is possible for a government to make decisions at the national level for the society as a whole, but differentiate its policies in response to the particular problems and tastes of the people living in each locality

² Hobbes was aware that distance compromised the capacity of the monarch to rule in all matters. He therefore contrasted division of authority with division of administration, and advocated division of administration for far-flung territories or colonies. Hobbes had little to say about the scale of the Leviathan, though he was aware that the war of all against all might be replicated (less destructively he asserted) in struggle among Leviathans (Hobbes 1960 [1651]).

(Treisman 2007: 53-73). This kind of arrangement goes by several names: administrative decentralization (versus political decentralization), deconcentration (versus devolution), or centralized differentiation. Administrative decentralization combines the virtues of authoritative centralization and decentralized policy provision. It has the Hobbesian virtue of hierarchy, eliminating ambiguity about who rules, yet it can provide each locality with the policies it prefers (except one: self-rule).

The debate about this involves two separate questions. The first concerns whether decisions about local public goods should be taken at the national level. Public choice theorists agree that efficiency requires that the provision of public goods having national externalities or national economies of scale should be centralized; the open question is whether local public goods—public goods designed to meet local tastes and which have only local externalities and local economies of scale—can be efficiently determined at the national level. Is it better to make decisions on local public goods at the local or national level? A second question concerns who selects those local actors. Should they be centrally appointed or locally elected?

This distinction clarifies the positions taken by proponents of administrative decentralization. The claim that local public goods can be efficiently provided by central government rests on an optimistic view of the capacity of central decision makers to collect and process local information. Central decision making on local goods requires that information collected by local agents be communicated to the center and that the center uses this information to differentiate policy across sub-jurisdictions to respond to local preferences. It is difficult to escape the conclusion that this involves at least one additional layer of communication as information is relayed from the local to the national

level and back again. As in the Chinese whispers game, this increases the risk that information will be miscommunicated. Treisman (2007: 213) has an ingenious response: “if—as is usually the case even in small units—the information collector is not the same person as the decision maker, such communication is inevitable whether government is centralized or decentralized. In either case, the information gatherer must communicate with the decision maker. So the argument reduces to one about whether the cost of physically transmitting information increases with geographical distance”.

This is a plausible argument for numerical or hard data, but implausible for soft information, that is, information that is expensive for an additional agent to verify (Stein 2002), and where local knowledge is useful in evaluating new information.³ At this time of writing, the town of Carrboro in North Carolina is debating whether to give planning permission to a new downtown development. The criteria include consistency with the architectural character of the town. Surely, a decision maker who is personally familiar with the town, its people and infrastructure, would be better placed to evaluate information relating to this criterion than one sitting in Washington DC. Diffuse local

³ “A decentralized approach—with small, single-manager firms—is most likely to be attractive when information about projects is “soft” and cannot be credibly transmitted. In contrast, large hierarchies perform better when information can be costlessly “hardened” and passed along inside the firm” (Stein 2002: 1891). The point made here requires only that soft information is costly to check, not that it cannot be checked.

knowledge is inconsequential when evaluating hard information, but is useful in appraising soft information.⁴

Hard information—quantitative data from mass surveys, financial data, and so forth—is particularly useful if one wishes to abstract from particular cases in order to draw general principles that might improve public policy. Such scholarly enterprise has national or global externalities, and is therefore appropriately conducted by large jurisdictions or by small jurisdictions acting in concert. Local decision making may benefit from information assimilated by larger governments, but in most cases, this information needs to be interpreted against local circumstances to be useful.

[Textbox 3 about here]

⁴ Treisman (2007: 212) identifies three objections to this line of argument. “First, although such accidental learning certainly occurs, it is unlikely to occur frequently enough to make much of a difference. Even in a small town, the mayor will have to make dozens of decisions every day on matters that go beyond his personal daily experiences. Second, such accidental observations may be highly misleading. The potholes on the mayor’s route may be smaller than those on other streets. The hospital may shift staff into the mayor’s ward to ensure that such an important patient is well attended. Third, to the extent that such serendipitous learning *does* occur, it may also occur for the locally based agent of a central decision maker.” These objections suggest that local information may be misleading or poorly processed, but it is difficult to conclude on this basis that having local information is worse on average than having only distal information or that local information that is conveyed to central decision makers will on average be more accurate.

There may, of course, be other reasons to centralize decision making. Local decision makers may be more incompetent or more corruptible than central decision makers. They may be more prone to undue influence by special interest groups. Or they may pursue immoral policies that induce the central government to intervene. But unless there is some countervailing concern, local decision making is at least as informationally efficient as central decision making for local public goods, and more efficient when decision making involves soft knowledge. The principle here appears simple and compelling: local decisions are best made by locals. How those people are selected is a separate matter.

DOES EFFICIENCY ACTUALLY SHAPE THE LEVEL AT WHICH DECISIONS ARE MADE?

Allocative efficiency is a prescriptive notion. Does it actually influence government structure? The short answer appears to be yes.

The fact that certain policies are provided at a similar scale in different countries is consistent with an efficiency explanation. Comparing public spending data across 14 western societies, Osterkamp & Eller (2003: 41) find that policies for recreation, culture, religious affairs, housing and community amenities, education, transportation and communication, and public order and safety are decentralized even in relatively centralized countries such as Luxembourg and France.

Surveys commissioned by the Council of Europe and the Local Government Institute in the late 1990s reveal a broader pattern of commonality (Schakel 2008). Refuse disposal is local in all 39 countries surveyed; nursery/kindergarten,

sewage/water treatment and parks/open spaces are local in 37 of 39 countries. The exceptions are illuminating. Very small countries sometimes conduct policies with only local externalities at the national level (e.g. nursery/kindergarten in Cyprus; sewage in Malta). In Belarus, sewage and parks are regional, rather than local. In some cases, a commitment to national unity (often in the face of demands for regional autonomy) sustains centralization. In Turkey, nursery and kindergarten policies are national, as are primary, secondary, and tertiary educational policies. The same logic applies in reverse where there are entrenched regional identities. Road construction, for example, involves the national level in all countries except Azerbaijan and Belgium.

Most policies are not uniformly conducted at one population scale. However, one cannot deduce from this that efficiency plays no role. Some policy areas, such as the environment, contain a basket of policies that may be efficiently provided at diverse scales. Other policies appear to require coordination among governments across scale. Of the 24 countries in the Council of Europe/ Local Government Institute survey that have three government tiers, 18 countries involve all three tiers in road construction, 16 on libraries, 15 on environment and museums, and a majority involves all three tiers in theater, tourism promotion, and health prevention.

Public goods that tend to be provided locally—refuse disposal, nursery/ kindergarten, sewage/water treatment, parks/open spaces, for example—appear to be characterized by local externalities and local economies of scale. But to press home the argument, one would wish to have a more systematic way of identifying which public goods are local and which national. No econometric analysis of externalities or economies of scale is available, but policy experts have been asked to evaluate the

optimal scale for 34 policies on the basis of their technical efficiency (Schakel 2008).

Textbox 4 compares mean expert evaluations for the ten most and ten least local policies against their actual provision, and suggests that technical efficiency is, on average, strongly related to provision.

[Textbox 4 about here]

If the technology of policy provision changes or if the policy portfolio changes, this should be reflected in the structure of government. The period since World War II has seen an unparalleled extension of government competence in welfare, microeconomic, environmental, educational, health, and transport policies (Agranoff 2008, Loughlin 2007, Sharpe 1993). Education, social security, and health have become the three most important expenditure categories for subnational government (Osterkamp & Eller 2003; see also Braun 2000, Ter-Minassian 1997). Correspondingly, a survey of regional authorities in 21 OECD countries from 1950 indicates that government has become more multilevel as the policy portfolio has diversified (Marks et al. 2008). This is consistent with the functional theory of federal-state relations which expects regional and local government to assume primary responsibility for providing the social and physical infrastructure in a modern economy, while the national government takes primary responsibility for redistribution (Peterson 1995: 17-38).

DOES INTERJURISDICTIONAL EFFICIENCY SHAPE GOVERNMENT?

The fundamental insight of technical and allocative efficiency is that public goods should be provided across a range of territorial scales, from the local to the global. In Olson's words: "[T]here is a need for a separate governmental institution for every

collective good with a unique boundary, so that there can be a match between those who receive the benefits of a collective good and those who pay for it" (Olson 1969: 483). Yet this is problematic, for it reproduces the dilemma of coordination at the level of jurisdictions.⁵

Two kinds of institutional set-up reduce transaction costs among governments and thereby interjurisdictional efficiency losses (textbox 5). The first, general purpose (or type I) government combines functions in non-intersecting governments at a limited number of levels. As noted above, nesting streamlines communication, and is used widely in information processing systems and in organizational design (Radner 1993, Treisman 2007: 63-69). This is depicted in textbox 2 and it appears to be a universal feature of general purpose government.

General purpose governments generally bundle competencies for territorial communities where membership is inherited or reflects life choices.⁶ Correspondingly, general purpose jurisdictions do not choose the collective problems they deal with: they engage the problems that confront given communities, including the conflicts that arise within them. Such governments exploit economies of scale in rule making and rule

⁵ If bargaining among the parties affected by a collective action problem were costless, then "all desirable public goods could be provided by voluntary action" (Olson 1969: 480). This applies to governments as to individuals.

⁶ General purpose governments may also be based on non-territorial community membership, as for example the clan system in Somalia, communal self-governance in the Ottoman empire, religious self-governance in India, or cultural-linguistic membership in the Communities in Belgium.

adjudication, and consequently have elaborate institutions for aggregating interests and expressing political competition.

[Textbox 5 about here]

The alternative form of government limits interjurisdictional coordination by disaggregating policy problems into near decomposable pieces. Simon (1969) argued that efficient organizational design requires that one minimize the extent to which the decisions of each constituent unit have short-term effects on other units. Applied to government this is task-specific (or type II) government, that is government designed around problems that can be dealt with independently. Task-specific governments cater to groups that happen to share a problem. Their forte is technical proficiency, not providing a stage for deliberation or resolving the clash of interests. Task-specific government avoids conflict or seeks to insulate decision making from political pressures.⁷ Membership is problem driven, not intrinsic.

⁷ The limits of task-specific government are illustrated in Bourdeaux' recounting of landfill policy in New York State. Landfill location involves technical issues relating to hydrogeology and long-term leachate testing of groundwater, but is also contentious because nobody wants a landfill in their backyard. When a 1980s state law required counties to set up systems for landfill management, many counties farmed out the task to autonomous type II authorities to "take the politics out of decision making" (2008: 350). These type II authorities "exacerbated conflict by failing to account for political pressures in their decision making, and at the same time, when the decision was forced back into a political arena, the elected officials then did not have the knowledge about or

General purpose government and task-specific government have contrasting strengths and weaknesses that ground expectations about their relative incidence. Type I jurisdictions make decisions on behalf of territorial communities. They are functionally appropriate for decisions that redistribute values and, correspondingly, for decisions where trade-offs across policies may facilitate agreement. Type II jurisdictions are efficient for problems that are nearly decomposable, for problems that can be solved by the application of knowledge, and for problems that do not involve redistribution.

Type I governments usually provide the context for type II governance; even when they do not establish or monitor type II governments, they determine the legal context. Type II jurisdictions often lie at the interstices of type I jurisdictions or overarch them in a scale-flexible way (Blatter 2003, Börzel & Risse 2005, Skelcher 2005). For example, the governance of rivers and water basins often involves externalities that cut across existing general purpose jurisdictions. Several European governments created special purpose jurisdictions in response to the European Union's clean water directive of 2004. In Sweden, five water authorities combining local governments, users, and environmental groups were set up to match water catchment areas and sea basin tributaries. Each is run by a centrally-appointed board of governors which can "overrule national sectoral administrations to safeguard environmental water quality norms" (Lundqvist 2004: 420). The Chesapeake Bay Council, established in 1983 by the U.S. Environmental Protection Agency, is similar in purpose. Set up in collaboration with Washington D.C., Virginia, Maryland and Pennsylvania, it marshals a variety of public commitment to a particular solution that would have enabled them to make an informed decision" (353).

and private organizations to provide a collective good—environmental protection of a water resource—that cross-cuts established government boundaries (Karkkainen 2004).

Task-specific government is preponderant at the international level. The chief line of research on international organizations starts "from the premise that there is always a need for international organizations whenever interdependent crossborder relations lead to interactions which states view as undesirable" (Rittberger & Zangl 2006: 19; Martin & Simmons 1998). International regimes enable state actors to overcome problems of collective action, high transaction costs, and informational deficits or asymmetries. "The denser the policy space, the more highly interdependent are the different issues, and therefore the agreements made about them . . . Where issue density is high, . . . one substantive objective may well impinge on another and regimes will achieve economies of scale, for instance in establishing negotiating procedures that are applicable to a variety of potential agreements within similar substantive areas of activity" (Keohane 1982: 339-40).

This might be considered a recipe for general purpose government, and under certain conditions it is. Several regional regimes bundle a range of public goods and have sophisticated machinery for arriving at agreements in the face of distributional conflict. But type I governance is rare. The vast majority of international agreements are bilateral or multilateral deals without agency. Of 35,269 post-World War II international agreements filed with the United Nations up to 1999, 2,330 are multilateral and the remainder bilateral (Koremenos 2005). The Correlates of War dataset lists 332 self-standing international organizations having at least three member states, a permanent secretariat and headquarters, and a plenary session at least once every ten years

(Pevehouse et al. 2004). Some 50 of these can be described as authoritative, having a formal constitution, a supreme legislative body, a standing executive, a permanent professional administration, and some formal mechanisms for enforcing decisions and settling disputes. Of these, seven might be described as general purpose: the European Union, the African Union, Caricom, the Nordic Council, the Arab League, Asean, and Ecowas (see textbox 6).

[Textbox 6 about here]

A distinctive characteristic of international organization is therefore the relative scarcity of government—regimes having formal decision procedures that embody some measure of central authority—and the predominance among international government of task-specific jurisdictions that are oriented to achieving pareto optimality where distributional conflict is not especially intense (Fearon 1998). The incidence of task-specific international government is particularly high in iterated standard setting (e.g. the World Customs Organization which produces numerous standards for simplifying and harmonizing customs procedures), or information and research (e.g. the Organization for Economic Cooperation and Development, which monitors trends in trade, environment, technology, taxation, social indicators, and analyzes and forecasts economic developments). Sixty-five percent of task-specific IGOs in the textbox are concerned with one or both of these tasks. General purpose international organizations have a broader reach. And they are about four times more likely to have authority over some core element of sovereignty, such as foreign policy, security, justice, or monetary policy.

Whereas task-specific IGO's often encompass states across the globe, general purpose IGO's are almost always limited to one, or perhaps two, of the world's nine regions. The mean geographical homogeneity for the seven general purpose governments listed above is 0.89, compared to 0.50 for 43 task-specific IGOs. That is to say, they have, albeit weakly, some of the attributes of what Ostrom (2005: 26-27) identifies as a community: a level of common understanding or shared mental frames, some degree of homogeneity of preferences, and limited inequality of assets. As weak as these are at the international level, their existence appears to be important in creating and sustaining general purpose international governments.

The limited number of authoritative regimes, predominance of task-specific government, and the rarity of general purpose government can therefore be viewed as efficient adaptation. But it appears to be adaptation to conditions that have little to do with efficiency—in particular, the path dependent development of national states and the consequent weakness of community at the international level.

CONCLUSION

The territorial structure of government exhibits some patterns that are repeated time and time again in different contexts and which appear to be explicable as efficient adaptation. Government in complex societies is arranged as a series of nested tiers encompassing exponentially increasing populations. Public goods having merely local externalities and local economies of scale are usually provided by persons living in the locality, rather than by central government. International public goods are generally provided by bilateral agreements. Where international government exists, it is

preponderantly task-specific, except where regional community can sustain general purpose government.

On one level, the evidence summarized here reveals a surprising degree of universality in the territorial structure of government. However, in each case, efficient adaptation is channeled by distributional and identity pressures. The interaction is perhaps most transparent for international governmental organizations. The weakness of community at the international level constrains the exercise of supranational authority, and this biases jurisdictional design away from general purpose government to jurisdictions that are designed to deal with specific, relatively decomposable problems. Such jurisdictions are poorly suited to providing solutions in the face of distributional conflict, both because they cannot exploit linkages across different policy fields and because redistribution is regarded as illegitimate when overarching community is weak.

Multilevel government and local public goods provision reflect efficiency precisely because the contending logics of decision making are muted. Distributional conflict and identity are rarely ignited on whether pre-school education, water treatment, or zoning policies should be local or national. When they are, efficiency is attenuated. The structure of subnational government hangs, literally, on the size of the state, which is itself the outcome of historical forces that have little to do with efficiency, and a lot to do with distributional geopolitical conflict. Moreover, in some states, regional units have histories as independent polities, and resist being marshaled to the drum of efficiency. As a result, the jurisdictional axes of states are never identical, but are diversely

oriented at the national level. Even here one finds multiple equilibria rather than convergence to a single equilibrium.

Literature cited

- Agranoff R. 2008. *Toward an emergent theory of IGR governance at the dawn of the network era*. Presented at the 4th Transatlantic Dialogue, Am. Society for Public Admin./Eur. Public Admin. Group, Milan
- Bache I, Flinders M. eds. 2004. *Multilevel Governance*. Oxford: Oxford Univ. Press
- Baumeister RF, Leary MR. 1995. The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psych. Bull.* 117(3):497-529
- Benz A. 2003. Mehrebenenverflechtung in der Europäischen Union. In *Europäische Integration*, ed. M. Jachtenfuchs, B. Kohler-Koch, pp. 317-51. Opladen: Leske & Budrich
- Beramendi, P. 2007. Federalism. In *Oxford Handbook of Comparative Politics*, ed. C. Boix, G. Stokes, pp. 752-81. Oxford: Oxford Univ. Press
- Besley T, Coate S. 2003. Centralized versus decentralized provision of local public goods: a political economy analysis. *J. Publ. Econ.* 87(12): 2611–37
- Blatter J. 2004. From 'spaces of place' to 'spaces of flows'? Territorial and functional governance in cross-border regions in Europe and North America. *Int. J. Urban & Reg. Research.* 28(3): 530-48
- Börzel T, Risse T. 2005. Public-private partnerships: effective and legitimate tools of transnational governance? In *Complex Sovereignty: On the Reconstitution of Political Authority in the 21st. Century*, ed. E. Grande, LW. Pauly, pp. 195-216. Toronto: University of Toronto Press

- Bourdeaux C. 2008. Politics versus professionalism: the effect of institutional structure on democratic decision making in a contested policy arena. *J. Public Admin. Res. & Theory*. 18(3): 349-73
- Braun D. 2000. *Public Policy and Federalism*. Aldershot: Ashgate
- Breuss, F, Eller M. 2004. *Fiscal decentralisation and economic growth: is there really a link?* Vienna: CESifo DICE Report 1/2004
- Cai H, Treisman D. 2004. State corroding federalism. *J. Public Econ*. 88, pp. 819–43
- Cederman LE. 1997. *Emergent Actors in World Politics: How States and Nations Develop and Dissolve*. Princeton: Princeton Univ. Press
- Davoodi H, Zou H. 1998. Fiscal decentralization and economic growth. A cross-country study. *J. Urban Econ*. 43, pp. 244–57
- Desai RM, Freinkman LM, Goldberg I. 2003. *Fiscal federalism and regional growth, evidence from the Russian Federation in the 1990s*. Work. Pap., Washington, D.C., World Bank Policy Research
- Dowding K, John P, Briggs S. 1994. Tiebout: a survey of the empirical literature. *Urban Stud*. 31:767-97
- Fearon JD. 1998. Bargaining, enforcement, and international cooperation. *Internat. Organ*. 52(2): 269-305
- Hayek F. 1945. The use of knowledge in society. *Am. Econ. Rev*. 35(4): 519-30
- Enderlein H, Wälti S, Zürn M, eds. 2008. *Handbook on Multilevel Governance*. Cheltenham: Edward Elgar
- Hobbes T. (1960)[1651]. *Leviathan, or The Matter, Forme and Power of a Common Wealth Ecclesiasticall and Civil*. Oxford: Basil Blackwell

- Hooghe L, Marks G. 2001. *Multi-level Governance and European Integration*. Boulder, Co: Rowman & Littlefield
- Hooghe L, Marks G. 2003. Unraveling the central state, but how? Types of multi-level governance. *Am. Polit. Sci. Rev.* 97(2): 233-43
- Hooghe L, Marks G, De Vries C, Van Alphen HJ. 2007. *International authority: a measure and a coding scheme*. Unpubl. paper
- Inman RP. 2008. *Federalism's values and the value of federalism*. Vienna: CESifo
- Kahler M, Lake D, eds. 2003. *Governance in a Global Economy: Political Authority in Transition*. Princeton: Princeton Univ. Press
- Karkkainen BC. 2004. Postsovereign environmental governance. *Global Envir. Polit.* 4(1):72-96
- Keohane RO. 1982. The demand for international regimes. *Internat. Organ.* 36(2): 325-55
- Keohane RO., Ostrom E, eds. 1995. *Local Commons and Global Interdependence. Heterogeneity and Cooperation in Two Domains*. London: Sage
- Kohler-Koch B, Eising R. eds. 1999. *The Transformation of Governance in the European Union*. London: Routledge
- Koremenos B. 2005. Contracting around international uncertainty. *Am. Polit. Sci. Rev.* 99(4): 549-65
- Lake DA, O'Mahoney A. 2004. The incredible shrinking state: explaining the territorial size of countries. *J. Conflict Resol.* 48(5): 699-722
- Leibfried S, Pierson P. eds. 1995. *Fragmented Social Policy: The European Union's Social Dimension in Comparative Perspective*. Washington: Brookings Inst

- Lecours A. 2001. Regionalism, cultural diversity and the state in Spain. *J. Multiling. & Multicult. Dev.* 22(3): 211-27.
- Loughlin J. 2007. Reconfiguring the state: trends in territorial governance in European states. *Reg. & Fed. Stud.* 17(4): 385–403
- Lowery D, Lyons WE, Hoogland DeHoog R, Teske P, Schneider M, Mintrom M, Best S. 1995. The empirical evidence for citizen information and a local market for public goods. *Am. Polit. Sci. Rev.* 89, pp. 705-09
- Lowndes V, Sullivan H. 2008. How low can you go? Rationales and challenges for neighbourhood governance. *Publ. Admin.* 86(1): 53–74
- Lundqvist LJ. 2004. Integrating Swedish water resource management: a multi-level governance trilemma. *Local Envir.* 9(5): 413–24
- Lyons WE, Lowery D, Hoogland Dehoog R. 1992. *The Politics of Dissatisfaction: Citizens, Services, and Urban Institutions*. Armonk, NY: M.E. Sharpe
- March GJ, Olsen JP. 1998. The institutional dynamics of international political orders. *Internat. Organ.* 52(4):943-69
- Marks G. 1993. Structural policy and multilevel governance in the EC. In *The State of the European Community*, eds. A. Cafruny, G.Rosenthal, pp. 391-410. New York: Lynne Rienner
- Marks G, Hooghe L, Schakel A. 2008. Patterns of regional authority. *Reg. & Fed. Stud.* 18(2–3): 167–81
- Marti-Henneberg J. 2005. The map of Europe: continuity and change in administrative boundaries (1850–2000). *Geopolitics.* 10:791–815.

Martin L, Simmons B. 1998. Theories and empirical studies of international institutions.

Internat. Organ. 52(4):729-57

Musgrave R. 1959. *The Theory of Public Finance: A Study in Public Economy*, New

York: McGraw Hill.

North DC. 1990. *Institutions, Institutional Change and Economic Performance*.

Cambridge: Cambridge Univ. Press

Oates W. 1972. *Fiscal Federalism*. New York: Harcourt Brace Jovanovich

Oates W. 2006. *On the theory and practice of fiscal federalism*. Presented at a

Conference, Bradford

(<http://www.law.nyu.edu/bradfordconference/papers/Oates.pdf>)

Olson M. 1969. The principle of 'fiscal equivalence': the division of responsibilities

among different levels of government. *Am. Econ. Rev.* 52(2): 479-87.

Ostrom E. 2005. *Understanding Institutional Diversity*. Princeton: Princeton Univ. Press

Osterkamp R, Eller M. 2003. *Functional decentralization of government activity*. Vienna:

CESifo DICE Report

Panizza U. 1999. On the determinants of fiscal centralization: theory and evidence. *J.*

Public Econ. 74, pp. 97-139

Patterson, TC. 1992. *The Inca Empire: The Formation and Disintegration of a Pre-*

Capitalist State. New York: MacMillan

Peterson H. 2007. *Evidence of Savings, Improved Outcomes and Good Practice*

attributed to Local Area Agreements. London: Whitehall, Dep. of Comm. & Local

Gov. (<http://www.communities.gov.uk/documents/localgovernment/pdf/381390.pdf>).

Peterson PE. 1995. *The Price of Federalism*. Washington D.C.: Brookings Inst.

- Pevehouse JC, Nordstrom T, Warnke K. 2004. The COW-2 international organizations dataset version 2.0. *Conflict Manag. & Peace Sci.* 21(2):101-19
- Pierson P. (2004). *Politics in Time: History, Institutions, and Social Analysis*. Princeton: Princeton Univ. Press
- Radner R. 1993. The organization of decentralized information processing. *Econometrica.* 61(5): 1109-46.
- Rittberger V, Zangl B. 2006. *International Organization: Polity, Politics, and Policies*. London: Palgrave
- Rodden J. 2005. *Hamilton's Paradox: The Promise and Peril of Fiscal Federalism*. New York: Cambridge Univ. Press
- Rodden J, Wibbels E. 2002. Beyond the fiction of federalism: macroeconomic management in multi-tiered systems. *World Pol.* 54, pp. 494-531
- Rubinichik-Pessach A. 2005. Can decentralization be beneficial? *J. Public Econ.* 89, pp. 1231-49
- Sbragia A. 2003. The European community: a balancing act. *Publius* 23(1): 23-38
- Schakel A. 2008. *Explaining regional and local governance: an empirical test of the decentralization theorem*. Amsterdam, VU Amst, mimeo
- Scharpf FW. 1997. The problem-solving capacity of multi-level governance. *J. Eur. Public Policy.* 4(4): 520-38
- Sharpe JL. 1993. The European meso: an appraisal. In *The Rise of Meso Government in Europe*, ed. JL Sharpe, pp. 1-39. London: Sage
- Simon H. 1969. *The Sciences of the Artificial*. Cambridge: MIT Press

- Skelcher C. 2005. Jurisdictional integrity, polycentrism and the design of democratic governance. *Governance*. 18(1): 89-110
- Stein JC. 2002. Information production and capital allocation: decentralized versus hierarchical firms. *J. Finance*. 57(5): 1891-921
- Tanzi, V. 1996. Fiscal federalism and decentralization: a review of some efficiency and macro-economic aspects. In *Annual World Bank Conference on Development Economics*, ed. M. Bruno, B. Peskovic, pp. 295-317. Washington D.C: Worldbank
- Ter-Minassian T. ed. 1997. *Fiscal Federalism in Theory and Practice*. Washington: IMF
- Thießen U. 2000. *Fiscal federalism in Western European and selected other countries: centralization or decentralization? What is better for economic growth?* Disc. Pap., Berlin: Deutsches Institut für Wirtschaftsforschung (DIW)
- Tiebout C. 1956. A pure theory of local expenditures. *J. Polit. Econ.* 64, pp. 416-24
- Tilly, C. 1992. *Coercion, Capital, and European States, AD 1990-1990*. London: Blackwell.
- Treisman D. 2007. *The Architecture of Government: Rethinking Political Decentralization*. Cambridge: Cambridge Univ. Press
- Weingast B. 1995. The economic role of political institutions: market-preserving federalism and economic development. *J. Law & Econ. Organ.* 11, pp. 1-31
- Wibbels E. 2006. Madison in Bagdad? Decentralization and federalism in comparative politics. *Ann. Rev. Polit. Sci.* 9, pp. 165-88
- Wildason D. 1996. Comment on 'Fiscal federalism and decentralization: a review of some efficiency and macroeconomic aspects' by Vito Tanzi. In *Annual World Bank*

Conference on Development Economics, ed. M Bruno, B.Peskovic, pp. 323-28.

Washington: Worldbank

Woller GM, Phillips K. 1998. Fiscal decentralization and LDC economic growth: an empirical investigation. *J. Devel. Studies*. 34(4): 139-48

Yilmaz S. 1999. *The impact of fiscal decentralization on macroeconomic performance*.

Presented at Annu. Meet. on Taxation, 92nd, Atlanta

Zhang T, Zou H. 2001. The growth impact of intersectoral and intergovernmental allocation of public expenditure: with applications to China and India. *China Econ. Rev.* 12(1): 58-81

Textbox 1

A hierarchy of conceptions of efficiency

Technical efficiency

- exploit economies of scale
 - internalize externalities of a policy
-

Allocative efficiency

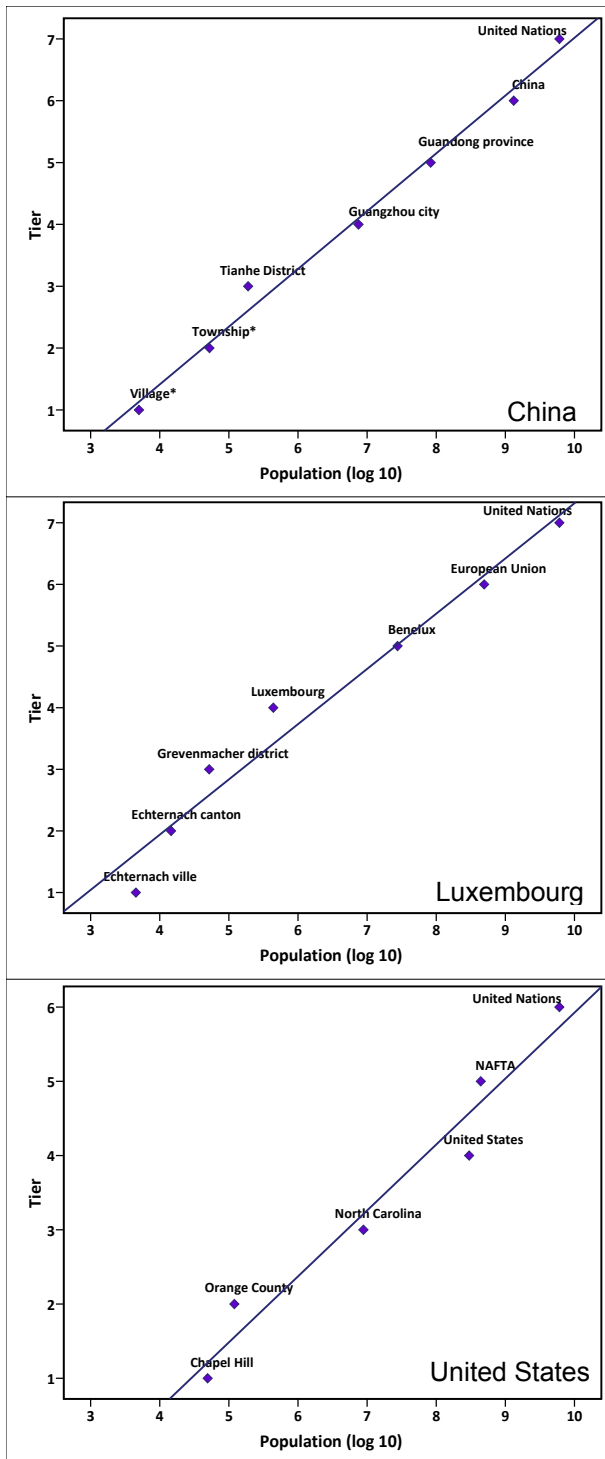
- technical efficiency plus minimizing heterogeneity of preferences within jurisdictions
-

Interjurisdictional efficiency

- minimize the fixed costs of government
 - minimize negotiation and transaction costs arising from the need to coordinate jurisdictions
-

Textbox 2

Is there an underlying structure of government?



A glance at the relationship between tiers of government and population size reveals an elegant and puzzling self-organization across a vast range of scale in countries as different as China, Luxembourg, and the United States.

The Y-axis in each figure arrays government levels in order of population size for a Chinese, Luxembourg, or American. The X-axis estimates the population of each level on a logarithmic scale. We describe the fitted line in each figure as the *jurisdictional axis*.

Jurisdictional axes can be reproduced in models where a social planner maximizes scale flexibility in policy provision, but minimizes the number of jurisdictional levels, and hence the fixed cost of government. The result is government at a limited number of levels encompassing exponentially increasing populations.

Population figures for 2000 census. General sources: www.geohive.org, www.statoids.org. National sources: the respective national bureaus of statistics. For China: www.stats.gov.cn/english/), for Luxembourg: www.statistiques.public.lu, for the USA: www.census.gov/main/www/cen2000.html.

Textbox 3

Soft information and decentralization

Many social problems, such as school drop-out, youth crime, alcohol abuse, and urban rejuvenation, manifest themselves different from locality to locality. To address these effectively a policy maker may need access to local “soft” information. In the United Kingdom, social policy making has traditionally been influenced by the principle “Whitehall knows best,” but in recent years, policy makers have come to rely more on local and regional input. One instrument for structuring such input are *Local Area Agreements*, three-year renewable contracts between central government, local or county councils, and local organizations to “deliver national outcomes in a way that reflects local priorities.” The agreements focus on problems affecting children and young people, neighbourhood safety and security, local health issues and ageing, or economic development (<http://www.lga.gov.uk>, accessed July 20, 2008). An academic evaluation claims that “The neighbourhood is . . . an appropriate location for programmes that stress prevention through changing citizens’ behaviour . . . for example, better parenting, smoking cessation. The success of such sensitive interventions depends upon detailed knowledge about lifestyles and family life” (Lowndes & Sullivan 2008: 66). A government-commissioned assessment concludes that there is “evidence of savings, improved outcomes, and good practice attributed to local area agreements”(Peterson 2007: 1 & 13; <http://www.towerhamlets.gov.uk>, accessed Sept 4, 2008).

Textbox 4

Optimal and actual decentralization

Does actual decentralization reflect technical optimality? The answer, according to the figure here, appears to be yes. The bars on the left represent the proportion of academic public policy experts (the striped bar) and the proportion of countries (the solid bar) that locate a common set of ten policies as local. The bars on the right provide the same information for ten policies that a smaller proportion of academic experts conceive as local.

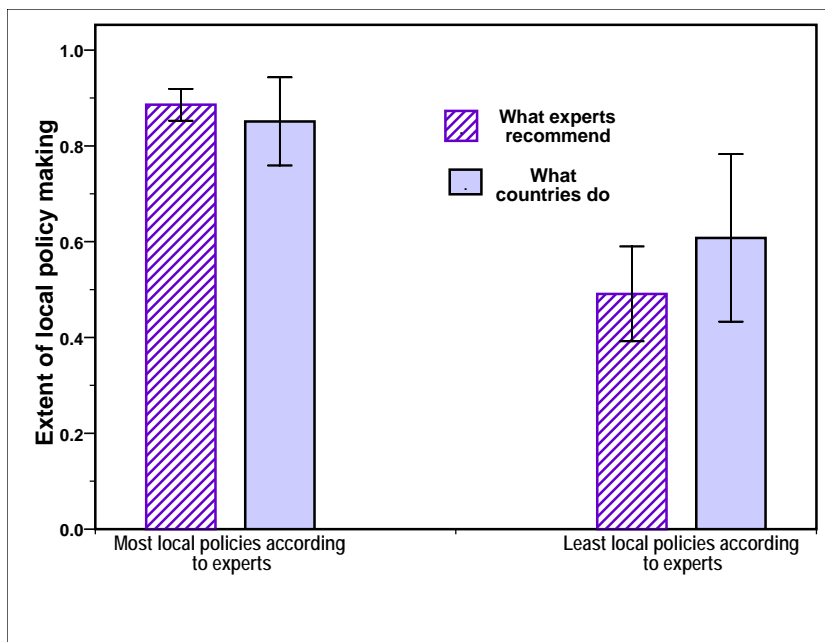
Data on actual policy provision are from a Council of Europe and Local Government Institute study asking teams of

country experts to estimate whether local, regional, national governments—individually or in combination—are responsible for 34 policies. Data on the optimal scale of government are average evaluations of technical efficiency (externalities and economies of scale) of 35 academic public policy experts for the same 34 policies (Schakel 2008). The bars on the left are averages for ten policies that experts consider most local and those on the right are averages for ten policies that experts consider least local. The sample contains policies that the Council of Europe and Local Government Institute consider as plausible candidates for decentralization, a bias that minimizes differences among the policies considered here.

The ten policies judged by experts to be most local are pre-school education, kindergarten, cemeteries/crematoria, primary education, fire protection, town planning, in-home services for elderly, refuse collection, secondary education, and libraries. Those judged by experts to be least local, in this sample, are transport, refuse disposal, tourism promotion, gas, environmental protection,

health protection (e.g. disease control), regional/spatial planning, electricity, higher education, and consumer protection.

Difference-of-means t-tests cannot reject the hypothesis that the means of the striped and solid bars on the right are the same ($t = -0.86$, $sig = 0.41$) or that the bars on the left are the same ($t\text{-test} = 1.5$, $sig = 0.15$).



Textbox 5

Types of Multilevel governance

	TYPE I General purpose jurisdictions	TYPE II Task-specific jurisdictions
<i>Design features</i>	combine problems with similar scale in one jurisdiction territorially non-intersecting limited number of jurisdictions limited number of levels	separate nearly decomposable problems in discrete jurisdictions territorially intersecting unlimited number of jurisdictions no limit to number of levels
<i>Biases</i>	intrinsic community voice conflict articulation	extrinsic community exit conflict avoidance
<i>Examples</i>	London, Catalonia, Flemish Community, United States, China, European Union, African Union, Inca empire	US school districts, Local Area Agreements, Chesapeake Bay Council, NATO, World Health Organization, Dutch water boards

Source: based on Hooghe & Marks (2003)

Textbox 6

Authoritative international organizations

General purpose international organizations tend to be regionally specific. This figure maps the fifty most authoritative international governmental organizations (IGO) by policy scope and geographical community.

Policy scope estimates the number of policy areas (from thirteen categories) over which an international governmental organization (IGO) has formal authority: political cooperation, foreign policy, diplomacy; security & defense; justice & interior affairs; trade; finance & monetary affairs; common pool resource problems (including environment); standard setting, coordination & monitoring; industrial policy (sectoral policies, such as transport, energy, telecommunications, natural

resources); aid (development aid, regional development, poverty reduction); human rights (including social & labor rights); health, food safety, nutrition; culture, education; research, data collection, communication (Hooghe et al. 2007). Two teams coded each IGO on these categories. The simple correlation of their evaluations = 0.71 .

Geographical community measures the diversity of the member states of the each organization across nine world regions (Africa, Middle East, Europe, South Asia, East Asia, North America, Central America, South America, and Australasia):

$$GeographicalCommunity = \sum_{i=1}^m s_i^2 ,$$

where s_i is a region's share in an IGO's membership, and m refers to the number of relevant regions.

Membership and population figures are for 2000, and taken from the Correlates of War data set (Pevehouse et al. 2004).

