Scientific Background: Subtheme Papers

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Fiscal Federalism and Political Decision Structures

1. Introduction

Federal systems are characterised by a large degree of decentralisation of the public sector, which consists of at least two levels of government, each vested with well-defined competencies and financial resources. Federalism is more than just decentralised administration. The all-important feature is that the governments at the individual levels make decisions regarding public policies and resources in their own area of responsibility and according to their own preferences (Riker, 1964).

The assignment of public responsibilities (or competencies) and revenues to the different levels of government is a key question of federalism. It can be discussed from various perspectives. The classic economic theory of fiscal federalism regards it as a static allocation problem and derives answers based on principles of efficiency. Public choice theory and the new theory of market preserving federalism (Weingast, 1995; MacKinnon, 1997) interpret federalism primarily as a way of imposing discipline on self-interested politicians and governments, and a hedge against the abuse of power and excessive growth of the public sector. From this perspective, the allocation of responsibilities and resources should create a maximum degree of

competition among governments. Finally, federal systems can be interpreted as arrangements for risk sharing among regions or jurisdictions.

This paper reviews these different perspectives of federalism and their answers to the assignment problem. First it discusses the classical view of fiscal federalism. Secondly it considers federalism as a competitive device, while Thirdly it discusses the implications of the risk-sharing view for the assignment problem. Fourthly, it looks at tax assignment and financial arrangements in federal systems. The final section concludes.

2. Federalism as an allocative device

2.1. Fiscal equivalence

Traditional theory of fiscal federalism deals with the distribution of responsibilities across jurisdictions as a static allocation problem. The goal is to achieve a welfare-maximising provision of public goods and services. The basic allocative rule is the principle of reciprocity (Musgrave, 1986) or fiscal equivalence (Olson, 1969). It says that the spatial incidence of the benefits of a public policy should coincide with the geographical boundaries of the government operating and financing the program. Otherwise, benefit or cost spillovers to other jurisdictions would create external effects. The government operating the policy would disregard these externalities and fail to achieve a welfare optimum for society as a whole.[1] Fiscal equivalence also rules out “internalities”, i.e. situations in which a policy’s area of incidence is smaller than the area of the jurisdiction, which leads to similar welfare losses.[2] The correspondence of the region benefiting from a policy and the region paying

for it assures Pareto-efficient outcomes in the provision of public goods and services.

The equivalence principle provides an important benchmark for the design of federal entities. As an organising principle, it says that public policies with important spillovers between local jurisdictions should be administered and financed by higher-level governments, while policies with little or no spillover should be administered and financed by lower-level governments. Pure public goods such as national defence, whose benefits fall on the entire population of a country, should be provided by the central government, while local public goods, whose benefits are locally limited (such as street lighting) or which are strongly congestible (such as parks or schools) should be provided by sub-central governments. The principle also implies that the optimal size of a jurisdiction is determined by the rule that the per-user cost of providing a congestible public good or service at a given level equals the marginal cost of adding one additional user (Inman and Rubinfeld, 1997). It follows that the more important its congestion costs or the more locally limited its benefits, the smaller a jurisdiction administering a given public good should be.[3]

Fiscal equivalence establishes a preference neither for centralised nor for decentralised government per se. Its main tenet is to justify the coexistence of multiple levels of jurisdictions, including jurisdictions with overlapping geographical domains, structured according to the geographical incidence of their policies. Frey and Eichenberger (1999) take this principle to the extreme, advocating multiple layers of “functional, overlapping, competing jurisdictions” to achieve an optimal provision of public goods. The geographical borders of the jurisdiction for schools could be different from those for universities. There

are certainly practical limits to this that arise from economies of scale in administration and political governance. Nevertheless, the principle is important. A more practical interpretation would be that fiscal equivalence can justify and encourage cooperation among local jurisdictions, for example, to facilitate the efficient provision of public services in metropolitan areas, which often cut across historically fixed city and state borders.

Like the principle of equivalent taxation,[4] the principle of fiscal equivalence seems to rule out re-distributive policies. Clearly, however, it does not rule out re-distributive policies within jurisdictions. To the extent that relatively rich citizens dislike poverty in their immediate neighbourhoods, economic support for the poor has the character of a local public good and, according to the principle of fiscal equivalence, should fall under the competence of local governments for efficiency reasons (Pauly, 1973).[5] Nevertheless, traditional fiscal federalism assigns the responsibility for redistribution to the central government (Musgrave, 1997). The main argument is that decentralisation would lead to too little income redistribution. When taxpayers are mobile, local governments will compete for rich taxpayers by offering them low tax rates; meanwhile, poor individuals will move to jurisdictions offering generous welfare programs. As a result, rich and poor individuals will tend to cluster in different jurisdictions, which implies that there is little scope for redistribution at the local level.

2.2. Preference heterogeneity and economies of scale

The efficiency principle behind fiscal equivalence implies that the level and quality of public goods and services should vary across regions according to citizen preferences and local cost conditions. Indeed traditional fiscal

federalism regards the ability of local governments to tailor the provision of local public goods and services to local demands and circumstances as the principal justification for decentralised government (Olson, 1969). This is the essence of Oates' (1972) Decentralisation Theorem, which holds that:

"in the absence of cost-savings from the centralized provision of a good and of inter-jurisdictional 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."

Decentralisation gives citizens the opportunity to form local clusters of people with similar preferences, and to move to jurisdictions offering packages of taxes and public goods they like best. This is the essence of Tiebout's (1956) theory of decentralised government. Households "vote with their feet" to obtain the best combination of taxes and public goods. If all jurisdictions are small and all households are very mobile, decentralised government can achieve the welfare optimum that a social planner would achieve. The implication is a version of the principle of subsidiarity, i.e. the rule that decentralisation of public policies is always preferable, and should be applied unless there are strong reasons for centralisation.

The basic idea behind this reasoning is to create a market environment for public policies and services, in which households reveal their demand, and local governments offer services for which they charge taxes that play the role of market prices. While the idea has obvious appeal, it is not uncontroversial. One important question is whether household mobility sends the right market

signals. Households certainly differ in terms of mobility, and the preferences of the most mobile ones, like single-person households or the elderly and retired are not necessarily representative of the general population (Donahue, 1997). Local governments offering tax-service packages to attract mobile households thus do not necessarily maximise public welfare. Furthermore, one may question the viability of competition among local governments, a point we return to below.

When public goods or services involve large externalities, the assignment of competencies may face a trade-off between the efficiency gains from moving the relevant policies to higher levels of government that internalise the externality, and the welfare loss from not responding to preference heterogeneity (Alesina et al. 1999, 2001). The presence of large economies of scale in the production of public services poses a similar trade-off. With homogeneous preferences, large externalities or economies of scale simply suggest assigning the production of the relevant public good to a higher-level jurisdiction. But if preferences differ across regions, and governments are constrained to deliver their services in uniform levels and qualities throughout their entire jurisdiction, the welfare costs of uniformity can exceed the efficiency gains from centralisation. Thus, preference heterogeneity and economies of scale add more specificity to the above version of the principle of subsidiarity. Public policies for which regional preferences are heterogeneous should be assigned to local governments, unless there are strong externalities or large economies of scale that justify moving them to the next highest level of government.

The uniformity constraint, i.e. the assumption that governments cannot vary the level or quality of public services across their geographical domains, is critical for this argument. It could be the result of imperfect information at the centre, or of political or legal limits to the diversifiability of services provided by higher-level governments (Oates,1999). However, it is quite clear that this constraint is less binding in practice than it might appear at first. For example, there is little doubt that in responding to the perceived military threat from the Soviet Union and the resulting worries of local populations, Germany's federal government supplied increasingly intense military defence services to Eastern as opposed to Western regions of West Germany before 1989.[6] But since there are important spillovers of military defence activities between the eastern and the western part of the country, efficiency still demands that defence be a national prerogative. One might think that regional differentiation is most difficult when it comes to transfers and entitlements, as these create quasi property rights, and central governments are constitutionally bound to treat all individuals equally before the law. But again, practical experience suggests a fair degree of variation in the administration of centrally provided welfare or transfer programs. If higher-level jurisdictions can operate public policies with regionally differentiated levels of activity, the tension between externalities, economies of scale and preference heterogeneity is greatly reduced and the assignment rule of fiscal equivalence remains applicable.

The critical question then is, what determines the responsiveness of higher-level governments to regional variations in preferences?[7] This is primarily a question of political participation of the citizens in decision making at the higher level, and of the democratic accountability of the political actors at the

higher level to the citizens, i.e. a question of agency cost. Direct democracy is a powerful participation mechanism, but difficult to implement at the central level of government. Under representative democracy, small district size[8] promotes electoral competition and makes centralised policies more responsive to local preferences. First-past-the-post elections and the opportunity for local voters to change the selection and hierarchy of candidates on party lists have similar effects (Persson and Tabellini, 2000). This suggests that the assignment of competencies should be evaluated and discussed in the context of the political mechanisms for participation and accountability. This refines our assignment rule. The weaker the mechanisms for democratic participation and accountability at the central level of government and the more heterogeneous local preferences, the greater the weight given to demands for decentralised assignment of public policies should be.

2.3. Shared responsibilities

So far, we have followed the general approach of the literature, and assumed that the responsibility for individual public policies can only be assigned exclusively to one level of government, i.e. it is either a local, regional, or national task. This is unnecessarily restrictive. Shared responsibilities can provide some improvements in dealing with the welfare trade-off between centralisation and decentralisation. Classical welfare economics suggest that externalities between local jurisdictions can be addressed by Pigovian taxes and subsidies imposed by the central government. By paying conditional, per-unit grants to local governments subsidising the cost of public goods generating positive externalities, or by imposing financial charges on public

goods generating negative externalities, the central government can change the marginal costs of the relevant policies faced by the local governments, and induce them to provide the levels of public goods that maximise social welfare at the national level. The provision of the relevant public goods then remains a task of the local governments, subject to financial incentives set by the central government. The advantage is that such arrangements preserve the responsiveness of public policies to local preferences and conditions, and yet correct for externalities. Since the geographical design of local and regional jurisdictions is more often the result of historical developments than of deliberate planning exercises, shared responsibilities should be the norm rather than the exception.

However, the efficient use of Pigovian taxes and subsidies requires the verifiability of local preferences and conditions. When local governments can misrepresent costs, preferences, and the size of the relevant spillovers, Pigovian taxes and subsidies can distort choices at the local level and create more inefficiency rather than less. For example, in an empirical analysis of federal grants in the United States, Inman (1988) concludes that the link between inter-jurisdictional spillovers and the size and structure of grants received is very weak at best. In practice, therefore, informational constraints may be too large to use this approach extensively.

Alternatively, shared responsibilities can take the form of central government programs providing certain public goods in parallel with local governments, or of federal mandates. In the former case, the central government provides a uniform level of a public good to all local jurisdictions, allowing local governments to provide additional levels financed out of local taxes if they

wish to do so. Under a federal mandate, the central government requires local governments to produce a minimum level of a certain public good, leaving it to their choice to provide more of it. In both cases, the federal government can achieve a better position in the trade-off between welfare gains from centralisation and losses from uniform central services, by setting a minimum standard or providing a level of the public good lower than it would do if it were the sole provider. While the central government policy alleviates the externality problem in these cases, the possibility of additional local production of the public good reduces the cost of uniformity.

To conclude, we have a further refinement of our assignment rule. Where externalities and preference heterogeneity are important, shared responsibilities leaving the primary competence for a public policy with the local government and giving the central government the authority to intervene, can be used to find a better position in the trade-off between the welfare gains and losses from centralisation.

3. Competition as a disciplinary device

The efficiency considerations behind fiscal equivalence rest on the traditional view of government as a neutral body maximising public welfare. Public choice theory takes a radically different view. It regards politicians as rent-seeking individuals using their positions to pursue private goals, and government as an institution that encroaches on individual freedoms and seeks to increase its grip on the private economy as much as possible. This view of government as a “Leviathan” emphasises the importance of institutional rules and arrangements forcing politicians to serve the public

interest in the pursuit of their own goals and limiting their discretionary powers (Brennan and Buchanan, 1977).

The Leviathan view leads to a different perspective on the optimal regional structure of government. Brennan and Buchanan argue that competition among local jurisdictions constrains the discretionary powers of politicians and leads to lower levels of government spending and taxation. By creating and promoting such competition, federalism puts a check on the growth of Leviathan and on the abuse of power by rent-seeking politicians. In Hirschman's (1970) terms, federal structures give citizens opportunities for "exit" – moving themselves or taking their assets to jurisdictions whose economic and fiscal policies they like – in addition to the "voice" of their democratic votes. This has an immediate implication for assignment. Decentralised government is beneficial even in the presence of homogeneous preferences over public goods, and even in the presence of large economies of scale in public goods production, because it yields better government.

The Leviathan view poses the general assignment rule that policies should be generally assigned to the lowest levels of government to promote competition, unless there are strong reasons for more centralised solutions. This generates another version of the subsidiarity principle. Policies should be delegated to the lowest level of government, unless it is proven that the latter cannot fulfil the tasks connected with them satisfactorily. This is, in essence, the version of subsidiarity that found its way into the Maastricht Treaty on European Union. Note that, according to this principle and its traditional interpretation prevailing in Germany, it is not sufficient to prove that a certain task cannot be fulfilled optimally by lower-level governments in order to justify moving it up to the next

level of government. Satisfactory is a much weaker standard, and by putting it this way, the principle recognises the trade-off between optimality derived from static efficiency principles assuming benevolent government and the benefits of competition among self-serving governments.

Weingast (1995) and McKinnon (1997) take these ideas one step further to the concept of "market preserving federalism." Weingast (1995, 1) regards federalism as a solution to the fundamental political dilemma of an economic system:

"A government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens. Thriving markets require not only the appropriate system of property rights and a law of contracts, but a secure political foundation that limits the ability of the state to confiscate wealth."

Market preserving federalism solves this dilemma by combining strong local government with a federal government enforcing nationwide free markets and free mobility of factors, goods and services. The same author classifies a federal system as market preserving if the primary responsibility for regulatory and economic development policies remains with the sub-national governments, a common market is enforced, and sub-national governments have no access to money creation or to central government bailouts for bad local projects or policies, or excessive debts. The first condition limits the central government's power to confiscate wealth. Together with the second condition, it establishes competition among the sub-central governments, ensuring that individuals can leave regions with unfavourable regulatory

regimes, and that local governments cannot abuse their power by erecting artificial barriers to trade and mobility. This keeps local governments from appropriating excessive economic rents. The third condition assures that local governments are responsible for their actions. Market preserving federalism demands the following assignment rule. Local governments should be responsible for all policies of economic regulation and development, while the central government is responsible for developing a federal constitution committed to the principles of free and open markets, and for monitoring and enforcing its proper implementation. Rules such as the inter-state commerce clause in the United States or the principle of mutual recognition of national regulation in the European Union (EU) are essential elements of a constitution promoting competition among local governments.

Apart from the assignment rule itself, the assignment principles resulting from the Leviathan view and market preserving federalism have an important procedural aspect. A federal constitution must answer the question: who has the right to change the assignment of competencies over time? Both views of federalism predict that giving this right to the central government would result in a too-powerful central government in the long run. Giving it to the local governments would have the same result in the long run, as politicians at the local level would allow the higher-level governments to assume new competencies in exchange for the permission to erect local monopolies and barriers to trade, and in an attempt to weaken their accountability to the local voters. The implication is a procedural assignment rule as a safeguard against excessive centralisation. Citizens at the local level should have strong gate-

keeping or veto powers, including access to the courts, against attempts to move any competence from the local to a higher level of government.

As indicated before, the claim that competition among governments improves the efficiency of the public sector is not uncontroversial. Not surprisingly, theory suggests that the effectiveness of competition depends on the circumstances. Oates and Schwab (1988) show that inter-jurisdictional competition can yield efficient outcomes if consumer preferences are relatively homogeneous and local governments have access to efficient tax instruments. Otherwise, it can result in sizeable welfare losses. Other contributions demonstrating the efficiency of inter-jurisdictional competition typically assume that such competition operates in an environment where all jurisdictions are small and act like price takers, and no potential taxpayers have any market power. This is obviously unrealistic in practice, and the results of imperfect inter-jurisdictional competition are less well understood. Practical experience suggests that it can lead to inefficient outcomes, for example when a large potential taxpayer such as a multinational company shops around regional governments for infrastructure investments as a precondition for building a new production site. As all regional governments deliver such investments but only one obtains the production site, the others are left with wasteful, unused infrastructure. Under such circumstances, some collusion among the regional governments ensuring that no government invests resources before location decisions have been made can improve the outcome.

Sinn (1997, 1999) challenges the idea of useful competition among Leviathans even more strongly. He notes that government interventions in the

economy tend to respond to market failures due to increasing returns to scale or problems of asymmetric information. Sinn calls this the selection principle. Under such conditions, competition among governments cannot replace competition among private suppliers without leading to the same problems of market failure. Sinn (1997, 270) summarises succinctly: “Competition is bad, when government intervention is good.” This suggests that competition among Leviathans can be useful to discipline government in areas where their intervention is not essential from an economic point of view, but the general applicability of the concept to the design of federal entities is limited to that.

Empirical evidence on the outcomes of competition among governments remains scant and inconclusive.[9] United States literature on education suggests that competition improves the performance of public schools, but the applicability of these results for other areas of public policy remains in question.

4. Federal systems as risk-sharing arrangements

Federal systems can be interpreted as arrangements for sharing idiosyncratic risks among regions.[10] Regions enjoying positive idiosyncratic shocks pay transfers to regions suffering from negative idiosyncratic shocks. Such transfers could be paid to individuals or exchanged among the regional governments. In the first case, the federal arrangement provides individual consumption smoothing. In the second case, the federal arrangement insures regional government budgets against exogenous fluctuations, and this serves indirectly to smooth individual consumption and taxes. There is now a large literature on risk sharing in federal systems, showing that fiscal mechanisms

in existing federations smooth a significant part of idiosyncratic shocks at the level of provinces or states.[11] Risk sharing can be provided vertically, through the budget of the federal government or a federal unemployment insurance program, or horizontally through fiscal equalisation. The United States is a prime example for the former, while Germany is a prime example for the latter. Buchanan (1950) regards fiscal equalisation as an outflow of the principle that equal citizens deserve equal fiscal treatment regardless of where they live in a federation.[12]

In our context, risk-sharing arrangements are relevant for two reasons. The first issue is whether risk sharing should be a federal program or a program of the regions or states. The difference is important if the regions differ in terms of their mean incomes or their exposure to idiosyncratic shocks, and risk-sharing arrangements result in insurance and permanent income redistribution. Persson and Tabellini (1996a) show that vertical federal programs tend to oversupply, while horizontal programs tend to undersupply insurance under such circumstances.

The second issue relates to moral hazard problems. Persson and Tabellini (1996b) assume that regional governments can invest public resources in projects that reduce their exposure to adverse idiosyncratic shocks. As usual in an insurance context, the prospect of receiving transfers when bad shocks occur reduces the incentive to invest in such projects. Migué (1993) observes more generally, that risk-sharing arrangements in federations reduce the incentives for regional governments to conduct economic policies aiming at strong economic development. In the current German debate about fiscal equalisation, it is often pointed out that states that are likely to be net

contributors to the system have very low returns on projects increasing tax revenues. Persson and Tabellini (1996b) show that these moral hazard problems strengthen the case for assigning the responsibility for risk-sharing arrangements to the central government. The latter can pay investment subsidies to the regional governments to mitigate the moral hazard problems. Thus, there is a strategic complementarity between risk sharing and federal investment with (subsidy) programs justifying federal government engagements in the latter type of policy.

5. Financial arrangements in federal systems

5.1. Tax assignment

The assignment of taxes of different types to the different levels of government is called the “tax assignment problem” in fiscal federalism (McLure, 1983). Again, static efficiency considerations are used to answer the question of which kinds of taxes are best used at the different levels of government. The key issue is to avoid distortions in the location choices of mobile households and firms, which could arise if tax rates charged at the local level differ widely across jurisdictions. For example, large differences in excise taxes between local jurisdictions could induce consumers to spend resources on inefficient travel to places with low tax rates. Similarly, low business tax rates may bias investment decisions away from locations where the pre-tax marginal return on capital is maximised.

Gordon (1983) identifies several sources of inter-jurisdictional spillovers connected to local taxes. They include tax exporting, changes in congestion costs faced by residents of other jurisdictions, changes in tax revenues

received in other jurisdictions, and changes in output and factor prices in other jurisdictions. The first occurs when residents of other jurisdictions pay part of the tax revenue, for example because they buy a product produced and taxed locally. The other effects are the result of taxpayer relocations due to changes in local taxes. For example, the congestion of local schools and parks declines if taxpayers move away from a community in response to lower taxes elsewhere. The basic insight from such considerations is that local governments should avoid non-benefit taxation of economic agents, factors or goods characterised by a high degree of mobility (Oates, 1999). While mobile agents, factors or goods could be charged benefit taxes by local governments (Oates and Schwab, 1988), immobile factors are ideal objects of taxation for them. Thus, local governments should be assigned taxes on land and real estate in addition to service charges for water, sewage etc. Non-benefit charges, in contrast, should be left to higher levels of government. A further implication from these considerations is that non-benefit charges on mobile individuals, factors or goods imposed by sub-central governments, if they are not avoided, should focus on resident-based taxation rather than source-based taxation (Inman and Rubinfeld, 1996). Since the implementation of residence-based taxation is difficult for taxes on output and consumption, this strengthens the argument against assigning such taxes to local governments.

5.2. Tax competition and harmonisation

An important issue in the assignment of taxes arises from the potentially detrimental effect of tax competition under decentralised taxation. One version of the argument holds that local governments compete for businesses and new jobs or for rich taxpayers by promising low tax rates or generous tax

breaks for firms locating in their region (Break, 1967).[13] As a result, they are faced with low revenues, and forced to limit the quantity and quality of (non-business-oriented) public services. As other local governments follow, tax competition leads to an equilibrium with inefficiently low public services. Each local government finds it optimal to keep its tax rate low to attract taxpayers, although all governments and citizens collectively would prefer higher tax rates and higher levels of public goods. The extreme case is a "race to the bottom", with no public services provided in equilibrium. Although empirical evidence on the importance and effects of tax competition is scant (Musgrave, 1997), the argument plays an important role among policy makers and in discussions about tax assignment in practice.[14]

The traditional theory of fiscal federalism responds to this with an efficiency-based theory of tax harmonisation among local governments and a theory of vertical grants, i.e. transfers from higher- to lower-level governments (Olson, 1969; Break 1980). Limiting regional differences in tax rates reduces the importance of tax considerations in citizens' location choices, and thus inefficient competition for tax resources. Once the allocational role of vertical transfers has been acknowledged, it is straightforward to argue that fiscal equivalence has no implications for the assignment of individual taxes to specific jurisdictions at all. Instead, the assignment of the task of tax collection should be governed by efficiency criteria too (Spahn, 1988). Economies of scale in the collection and administration of taxes then suggest that the highest level of government should be given the right to collect the most important taxes, such as taxes on income or value added. Centralised tax collection can be combined with revenue sharing and vertical transfers

ensuring that the revenues and expenditures match at all levels of government.

However, centralised tax collection and heavy reliance on vertical grants by local governments weaken incentives for local governments to maintain a sufficiently large tax capacity at the local level. Local governments relying on vertical grants, however, have at best weak incentives to engage in such activities, since the pay-off from doing so accrues to all governments, and is therefore too low for the individual one. Such incentive problems can be reduced by firmly tying the size of vertical grants to the taxes collected in the local or regional government's jurisdiction, or by allowing local governments to piggy-back on central government taxes, i.e. to charge a local tax in addition to the federal tax collected by the central government.

By contrast, from the public choice perspective, tax harmonisation and vertical transfers are harmful forms of inter-government collusion that limit beneficial competition and generate more discretionary power for the politicians. Similarly, market preserving federalism argues against tax harmonisation and vertical grants, and demands instead that local governments have sufficient own-tax resources to operate, as this promotes responsibility.

A further issue concerns the form of competition under decentralised tax policies. The potential for harmful competition is probably greater when individual taxpayers like large corporations enjoy considerable market power. In such cases, it is important to ensure that local governments do not engage in resource-wasting bidding wars. Transparency of the process can probably do much to limit the potential damage. Furthermore, agreements to harmonise

tax rates among local governments create incentives for moving competition to the dimension of local tax administration, for example by promising variable levels of enforcement to potential taxpayers. Such competition is worse than competing on tax rates, as it promotes “price-discrimination” between taxpayers. Again, transparency is important in this context. To conclude, rather than suppressing tax competition among local governments, the central government’s role is to design and enforce rules promoting transparency and efficient competition.

5.3. Vertical imbalance and the fiscal commons problem

The discussion of tax assignment and tax competition above suggests that finding suitable taxes for local governments is difficult, and that the tax capacity of local governments is typically small (Tanzi, 1996). Most federations therefore have some form of vertical transfer from the central to the local governments. The resulting vertical imbalance – the financial dependence of lower-level governments on vertical transfers from higher-level governments – causes important incentive problems.

Consider a local government that fully retains all revenues collected from local taxpayers and receives no transfers from the centre. Budgeting decisions of this government are characterised by two conditions. The first is that spending on all policy projects will be expanded to the point where the marginal benefit accruing to local residents equals the marginal cost of increasing the size of the project, including the marginal welfare cost of local taxation. The second condition is that the marginal rate of substitution between public investment (i.e. spending on development projects that increase future tax revenues) and public consumption (i.e. non-productive spending including corruption) equals

the net marginal tax revenue from investment (Careaga and Weingast, 2000). Compare this government to one that receives all its revenues in the form of a transfer paid from common tax fund financed by taxes collected in all jurisdictions and administered by the central government. The first condition will change to equating the marginal benefit of all spending projects to q times the marginal cost, where $0 < q < 1$ is the share of the local taxpayers in the total tax fund. This implies that the local government expands spending beyond the efficient level. The second condition changes to equating the marginal rate of substitution to q times the marginal tax revenue from public investment less the marginal cost. This implies that the local government reduces investment spending and increases consumptive spending. Note that the second effect is even worse if revenue sharing operates through vertical grants fixed by the central government, as the local government will perceive no benefit from public investment, and hence cut it altogether.

Vertical transfers thus cause two important distortions in local financial decisions: they create a tendency for excess spending at the local level, and for biasing the composition of local spending against public investment, strengthening the local tax base. The first distortion is known as the “fiscal commons problem” (von Hagen and Harden, 1994; Velasco, 1999), since it resembles the coordination failure of common properties. The more directly local governments or the representatives of the regions or states of a federation can influence the size of the common tax fund (e.g. by determining the size of matching grants to local governments in the federal budget), the more important it becomes.

Taking the necessity of vertical transfers as given, the fiscal commons problem can be addressed by an appropriate design of the federal budget process.[15] This can be achieved by horizontal coordination or vertical coordination. The former entails negotiations among the local governments leading to binding agreements on the total size of the common tax fund before the individual governments determine their spending. Vertical coordination entails delegating the power to determine this size to a "fiscal entrepreneur", i.e. an individual representing a comprehensive view of public finances in all states, such as the central government prime minister or finance minister. The fiscal entrepreneur then fixes the total size prior to the state governments' budget decisions. Both approaches require limited amendment power of the legislature in the central government budget process, assuring that regional representatives cannot increase the total size of funds available for vertical transfers.

Where vertical transfers take the form of central government financing of local public goods in individual states or regions, the same logic applies.[16] Here, mitigation of fiscal commons problems can be achieved by strengthening the role of the central government finance minister, combined with amendment controls imposed on the legislature, or a dominating role for the finance committee in the federal parliament. Again, the main point is that the total size of such spending is fixed by a policy maker or a political body taking a comprehensive view of federal finances.

At the local level, there are three institutional arrangements to mitigate the fiscal commons problem. One is direct voter participation. Empirical evidence suggests that fiscal discipline is better in Swiss cantons where direct

participation is stronger (Kirchgässner and Feld, 1999). The second is strengthening the role of the finance minister relative to spending ministers in local budgeting decisions. Empirical evidence for the US states shows that states where the governor has more power in the budget process exhibit lower spending levels and less borrowing (Strauch, 1998). The third is to start the budget process with negotiations among the coalition partners on binding budget targets. The choice between these alternatives depends on political parameters at the local level – the degree of direct democracy constitutionally permitted and the prevalence of single-party versus coalition governments.

The composition bias in local government spending under revenue sharing can be institutionally addressed in two ways. One is to rely on federal controls, using as far as possible the incentive effects of conditional and matching grants and avoiding block grants and unconditional grants. The informational constraints of this approach are similar to those related to Pigovian taxes and subsidies. The alternative approach is to increase direct voter participation in budgeting decisions at the local level.

5.4. Soft budget constraints

Soft budget constraints prevail in a federal system when local governments are able to obtain more vertical grants to finance local expenditures ex post than ex ante, i.e. to spend more money than originally foreseen when local and federal budget decisions were made. An important context in which soft budget constraints arise is when central governments bail out over-indebted local governments. When bailouts can be anticipated, they create similar incentive problems as budgeted vertical transfers. Local governments borrow excessively to finance additional spending; when they eventually find

themselves unable to service their debts, the central government or central bank intervenes and comes forward with the necessary funds.

A necessary condition for soft budget constraints is the central government's willingness to grant bailouts. There are several important challenges to the credibility of a no-bailout commitment by the central government. If local governments are allowed to default on their debts, ripple effects can be transmitted through the financial system, and the entire country may face an increase in its risk premium due to the damage to its reputation. Important recent examples for this are Argentina and Brazil, whose debt problems in the 1980s and financial crises in the late 1990s and in 2001-2 are largely due to excess borrowing at the level of provincial governments (Aizenman, 1998). Sharp fiscal adjustments may force local governments to cut spending on health, home security, and education, which can have significant negative spillovers to other jurisdictions. Given the cost of letting local governments default, central governments may find granting more attractive than denying a bailout, even if they were determined to enforce hard budget constraints ex ante, a classic problem of "time inconsistency" (Kydland and Prescott, 1977). Even if the central government is unwilling to grant bailouts, it may be forced to do so by a legal mandate. An example is Germany, where the Constitutional Court ruled in the early 1990s, that the federation must grant state governments the resources to fulfil the tasks assigned to them by the federal constitution. In practice soft budget constraints are a significant problem in many federations, including Argentina, Brazil, India, Mexico, Australia, and Germany.

The idea that large jurisdictions are “too big to fail” is a popular one closely connected to the bailout issue. Wildasin (1997) develops a model of “too big to fail” based on the notion that negative externalities from local government default are proportional to the size of the jurisdiction. Thus, the cost of denying a bailout increases with the size of the jurisdiction and large states or regions are more likely to obtain bailouts. However, empirical evidence for countries belonging to the Organisation for Economic Cooperation and Development (OECD) (Australia, Germany, Italy, and Sweden) and several Latin American countries lends little support to this notion (von Hagen, 2000). In fact, bailouts are often granted first to small states or regions. An example is Germany, where the federal government bailed out two of the smallest states in the early 1990s. Political considerations and the perception that the cost of bailing out small jurisdictions is small may explain that observation. A second empirical observation is that bailouts often follow an increase in un-funded central government mandates, or a shift of fiscal responsibilities from the centre to local governments that is not matched by an increase in vertical transfers. In such scenarios, bailouts may reflect local governments’ unwillingness to assume the responsibilities put on them by the centre and to use local tax resources to fund them.

In order to enforce hard budget constraints at the local level, many existing federations subject local governments to ceilings on borrowing or debt. Such ceilings pose complex questions in practice. Empirical evidence suggests that borrowing constraints invite creative accounting and borrowing through off-budget entities, local financial institutions, or payment arrears with the private sector, allowing local governments to incur large financial liabilities

nevertheless.[17] As the example of the EU suggests, debt and deficit ceilings must therefore be combined with enforcement of transparent accounting rules. By relying on numerical limits on deficits and debts, debt and deficit ceilings also constrain the ability of local governments to react to negative fiscal shocks and, therefore, to contribute to macroeconomic stabilisation (Poterba, 1994). Where local government is relatively large, the resulting macroeconomic costs can be significant.

Vertical imbalance is again important in this context (von Hagen and Eichengreen, 1996). The larger the share of a local government's spending financed by own taxes, the more a local government in financial distress can be expected to make the necessary adjustments itself and raise additional taxes. In contrast, where local governments almost entirely depend on federal grants, denying bailouts is hardly credible, as the required adjustment can only come by cutting important local public services. Von Hagen and Eichengreen (1996) show that the empirical incidence of borrowing constraints is greater in countries with greater vertical imbalance. This suggests that reducing vertical imbalance is an important element in assuring hard budget constraints at the local level.

6. Conclusions

The assignment of competencies and financial resources to individual levels of government is a key issue in the design of federalist systems. Several considerations emerge from our review of the various perspectives under which the assignment issue has been discussed in the literature.

Public policies should be decentralised as much as possible to create choices for individuals according to their preferences and circumstances, and to create competition among local and regional governments. This is the essence of our preferred version of the principle of subsidiarity. Policies should be assigned to the local level unless there is sufficient evidence that local governments cannot fulfil the relevant tasks in a satisfactory way. Note that “satisfactory” is different from “optimal”, which is a technical condition, while “satisfactory” makes room for the citizens to decide on the trade-off between welfare gains and losses from decentralisation.

Where central government intervention is required to correct externalities, shared responsibilities (where the central government sets a minimum level of public services) are preferable to assigning the policy to the central government alone.

The key role for the central government in a federal system is to define and maintain an appropriate competitive order among lower-level governments. This includes both the enforcement of a unified market for goods, services, factors of production and financial assets, and rules governing local government behaviour in areas like tax and regulatory competition to avoid races to the bottom or wasteful bidding strategies for mobile taxpayers and businesses.

An important pre-requisite for effective competition among local governments is the enforcement of financial responsibility. Vertical imbalance should be kept small and vertical transfers should be avoided as much as possible. Hard budget constraints and proper budgeting institutions at the local and the

federal level are essential to maintain financial discipline, without which competition among governments cannot work properly.

Redistribution and risk sharing across regions fall under the competence of the central government. In contrast, there is considerable scope for interpersonal redistribution at the local level.

Finally, the assignment problem has an important procedural side, which is perhaps more important even than the answer to the question of who should do what in a federation. The procedural aspect is the answer to the question of who is allowed to change the assignment of tasks and resources over time. Theories of federalism that are more critical of the motivations of politicians and governments than the traditional approach of fiscal federalism, suggest that strong control rights in this regard should be given to the citizens at the local level to assure that a federal system will not become excessively centralised and lose its market preserving function.

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[1] Defence is a classic example. If the operation of the military were left entirely to city governments, no city would take into account that strengthening its forces has a positive impact on the security of neighbouring cities, and therefore these cities would invest too little in defence. Hence, defence policies are typically allocated at the national level. Macroeconomic stabilisation is another classic example.

[2] Here, a classic example is regional infrastructure. If regions can obtain infrastructure funding from the national budget, their representatives will ask for more projects than they would if the funding came entirely out of the region itself, since the cost of each project is spread over all taxpayers in the country.

[3] Inman and Rubinfeld (1997) point out that important public services such as health, water supply, sewage, and public education can be produced efficiently by relatively small communities.

[4] This principle requires that individuals should be taxed according to the amount of public goods they consume.

[5] Following this logic, critics of unemployment support in Germany demand a stronger role for city governments in the administration of these programs. See for example Berthold, 2002.

[6] There is also no doubt that Eastern regions paid (marginally) more for these services than Western regions as the government used land for military bases there.

[7] Inman and Rubinfeld (1997) distinguish between three types of federalism, “economic”, “cooperative”, and “democratic”, characterised by different modes of representation of local interests in the central government. Note that the responsiveness of local politicians to local preferences should not be taken for granted. When candidates for local government are nominated by national party leaders, local politicians depend on their benevolence and have strong reasons to cater to their interests.

[8] District size is the number of representatives in parliament elected per electoral district relative to the total number of seats in parliament.

[9] See Taylor (2000) for a recent review.

[10] For example Persson and Tabellini, 1996a, b; von Hagen, 2000; Bayoumi and Masson, 1995.

[11] For the United States, estimates indicate that the federal fiscal system smoothes between 10 and 15% of idiosyncratic shocks. Similar magnitudes are found for Canada. The German federal fiscal system, in contrast, provides very little smoothing of individual incomes, but almost complete insurance of state budgets against idiosyncratic shocks. See Kletzer and von Hagen (2001) for an overview.

[12] In Germany, the mandate to maintain uniform living conditions for all citizens of the Federal Republic is regarded as the constitutional basis for equalisation among the states. For Canada, the Rowell Sirois Commission in the 1940s first argued explicitly that equalisation was an important part of national solidarity and nation building (Cumming, 1986).

[13] Similar arguments pertain to local regulatory policies. For example, Donahue (1997) reports that Alabama offered Mercedes a subsidy package worth US$ 168, 000 per job to attract the company’s new automobile plant.

[14] Theoretical literature on the issue shows that tax competition can generate efficient equilibrium, and indeed be beneficial for local government. The latter is based on the idea that incumbent residents of a jurisdiction ultimately benefit from efforts to attract capital and business. However, as Oates (1999) points out and Sinn (1999) critically remarks, this requires assumptions that turn local governments into the equivalent of price-taking firms in perfectly competitive markets. In an interesting empirical study of tax competition in pre-World War I Germany, Hallerberg (1997) shows that Prussia enjoyed considerable market power and was able to hold taxes high.

[15] For an analysis of the importance of the budget process to overcome fiscal commons problems see von Hagen and Hallerberg (1999) and von Hagen and Harden (1994).

[16] Central government funding of local public goods is the classic case of pork-barrel spending considered in the United States literature; see Weingast et al., 1981.

[17] For example, Italian local governments whose tax basis was thin in the 1980s, and which were subject to a complete ban on borrowing nevertheless managed to incur large debts through payment arrears. These arrears were then presented *ex post* to the central government with the threat of closing hospitals and schools unless a bailout was provided. Italian local governments thus contributed significantly to the expansion of national debt in the 1980s (Bordignon, 2000). For evidence on US states see von Hagen, 1992.