Federalism Research Centre

Australian National University

FISCAL FEDERALISM
AN OVERVIEW OF ISSUES AND A DISCUSSION OF THEIR RELEVANCE TO THE EUROPEAN COMMUNITY

Cliff Walsh
(with contributions by Jeff Petchey)

No. 12 February 1992

Discussion Paper

FEDERALISM RESEARCH CENTRE

The Federalism Research Centre was established in 1972 with a special research grant from the Commonwealth (initially under the name Centre for Research on Federal Financial Relations). With effect from 1990, all States and Territories have agreed to match the Commonwealth's grant for an initial period of 3 years.

The Centre's research involves a focus both on fiscal issues and on the constitutional and institutional arrangements and operating conventions which shape federal financial, political and administrative interactions. It thus involves both 'fiscal federalism' and 'intergovernmental relations', and brings to bear perspectives from a range of disciplines, including economics, political science, public administration and constitutional law.

Information about the Centre's activities and publications can be obtained from

The Publications Officer
Federalism Research Centre
Research School of Social Sciences
The Australian National University
PO Box 4, CANBERRA ACT 2601.

Telephone (06) 249 3668
Fax (06) 257 1893

FEDERALISM RESEARCH CENTRE
DISCUSSION PAPERS

FISCAL FEDERALISM
AN OVERVIEW OF ISSUES AND A DISCUSSION OF THEIR RELEVANCE TO THE EUROPEAN COMMUNITY

Cliff Walsh
(with contributions by Jeff Petchey)

No. 12 February 1992

ISSN 1036–8655
ISBN 0 7315 1361 4

AUTHORS' NOTE

This paper has been prepared as an 'expert paper' for the European Commission. It is one of eight papers written by a group of academics on various aspects of fiscal federalism in theory and practice, and on their implications for the European Community, as inputs into the preparation by the expert group of a report on, broadly speaking, the public finance implications of economic and monetary union and beyond.

The expert papers, plus background and technical papers prepared by the European Commission personnel, will appear as a special edition of *European Economy*, probably in June or July 1992.

The Report, probably to be entitled something like Fiscal Europe, should be released in late March or early April 1992.

This paper is being circulated in this form, and at this stage, in the hope that it might reach a wider group of interested people more quickly than otherwise.

Cliff Walsh
February 1992

FISCAL FEDERALISM

AN OVERVIEW OF ISSUES AND A DISCUSSION OF THEIR RELEVANCE TO THE EUROPEAN COMMUNITY

Cliff Walsh
(with contributions by Jeff Petchey)*

1. INTRODUCTION

Although federal governmental structures have existed in a significant number of countries for a long period of time, in recent years there has been a resurgence of interest, worldwide, in what loosely might be called 'federal forms of government'. In some cases, this interest has arisen principally from tensions within existing 'federations': Canada, Yugoslavia, and (in a class of its own) the former Soviet Union, provide obvious examples. In other cases, interest arises because of the emergence of new federal or 'federal-type' forms of governments: this applies, for example, in Belgium, more dramatically in the European Community, and (again, in a class of its own) recently in the Commonwealth of Independent States which replaces the now dissolved Soviet Union.

Even where structures of government are reasonably well established, new experiments are being attempted. For example, new 'levels' of government have emerged to address new demands made on public sector decision-making, such as has occurred, for example, with the creation of metropolitan levels of government in Canada, the United States and the United Kingdom. And, in otherwise largely 'unitary' countries in Latin America and Europe, and in China, greater emphasis is being placed on the possible advantages of fiscal decentralization as a means of creating 'better', more efficient and more responsive, government.

Moreover, in mature federations, there has been a substantial reopening of debate about their basic structures. In Canada, problems arising from cultural and linguistic differences between Quebec and the

---

* Cliff Walsh, Director of the Federalism Research Centre, ANU, is the principal author, and accepts full responsibility for the contents, and the deficiencies, of this paper. Jeff Petchey, a Research Associate and Doctoral Student in the Centre, has contributed to the development of ideas in various parts, especially Sections 2.2 and 5, and is the principal author of Attachment 1.

rest of Canada have brought forth a flurry of recommendations about whether, and if so how, constitutional structures might be changed, *inter alia*, to accommodate the notion of Quebec as a distinct society. In Germany, both unification with Eastern Germany and tensions associated with a perceived *de facto* loss of sovereignty by sub-national jurisdictions as a result of European Community decision-making procedures has created a desire for a rethinking of the roles of governments.

Even in Australia, far away from tensions in the rest of the world, and with a relatively homogeneous population and a fairly well-integrated set of regional economies, questions about the federal structure have been opened up as part of an ongoing debate about the need for national economic restructuring to produce better economic performance and a better quality and delivery of government services.

What the literature on fiscal federalism can contribute to an understanding or an evaluation of these issues, or what advice might be derived from it that would be helpful to addressing the problems and issues, is an open question. That literature certainly has argued that 'fiscal structure' matters: that is, the degree of fiscal centralization or decentralization is claimed to affect the way the public sector operates, and to affect the package of public sector services that are likely to be offered, the way that they will be provided, and the way that they will be financed. While there unquestionably are important lessons for the European Community, and other emerging unions, to be drawn from the traditional public finance/fiscal federalism literature, it needs to be carefully assessed what it is, and is not, that is immediately relevant in that literature.

In effect, much of the traditional literature either assumes the existence of a federal or multi-level structure of government and attempts to offer a rationale for the fiscal structure associated with the political structure, or more generally assumes the existence of 'government' and a fisc and asks, why decentralize? The assumption that the comparison appropriately is between a multi-level government structure, including a well defined central government on the one hand, and a unitary government structure on the other, obviously limits the applicability of the traditional literature to the problems that are faced by emerging unions. The contrast with the current distinctive (but, in a sense, limited) European Community fisc and related 'political' institutions is self-evident.

Moreover, little of the existing fiscal federalism literature has much to say, directly or indirectly, about the dynamics of the *evolution* of unions of states. If it has anything to say about the process of formation of unions (as opposed to the redesign of existing fiscal systems), its insights are more immediately targeted at decisions relevant to the establishment of more-or-less fully fledged federal unions, to be fully equipped with 'traditional' (parliamentary or congressional) democratic political institutions at all levels of government.

In this paper, in the context of an overview of the fiscal federalism literature and recent developments in it an attempt is made, where possible, to draw a distinction between the lessons that can, and those that cannot, appropriately be applied in the context of emerging new unions, that of the European Community in particular. It will be clear, however, that in many respects the paper suggests a need for the development of alternative approaches to thinking about the fiscal issues involved in the formation of new unions, where the structures of mature federations cannot be assumed already to be in place or likely to be adopted in their entirety even as a result of evolutionary processes.

The balance of the paper proceeds through the arguments in the number of steps. In Section 2, the question 'why federal-type systems?' is posed and answers offered in different ways. In Section 3, I turn to an analysis of the distribution of allocative (and to an extent regulatory) functions within federal-type systems, and in Section 4 the question of allocation of taxing powers is briefly addressed. In Section 5, I briefly examine issues relating to mobility in federal-type fiscal systems, including how mobility affects redistributional policy in federal systems. In Section 6, the roles of intergovernmental grants are discussed: at this point, I adopt a somewhat unusual approach of considering principles of fiscal accountability as the basis for examining further some of the traditional assumptions about roles and functions of governments in federal systems, especially in relation to fiscal equalization and macroeconomic management. Section 7 offers a brief discussion of the (often simplistic) models of political process contained in the fiscal federalism literature, and of recent work assessing the connection between fiscal decentralization and public sector size and performance. Section 8 briefly discusses recent developments in thinking about organizational and managerial aspects of federalism, in particular the question of competition versus cooperation, and the management of joint tasks. Section 9 offers concluding remarks built around some of the distinctive features of the EC.

2. WHY FEDERAL-TYPE FISCAL STRUCTURES?

In the traditional fiscal federalism literature, the question of why there should be a federal-type fiscal structure, or multi-level government more generally, typically has been posed as a question about why decentralization should occur. That is, typically the analysis starts from an implicit assumption that there exists a central or federal government and that the question at issue is why a structure of sub-federal government with independent fiscal responsibilities should be developed. That this is a framework of limited direct relevance to the European case will be self-evident. Nonetheless, the analysis contains insights that are useful to the EC situation and will be briefly sketched before turning to ask the converse question — why would a system of 'sovereign' states wish to form an economic and (ultimately) political union?

It is also typically assumed or asserted in the discussion of decentralization of fiscal powers, or more generally the choice between centralization and decentralization, that the principal question revolves around allocative functions of government. That is, it is (usually explicitly) assumed that both distributional and macroeconomic management functions appropriately are assigned to the central or federal government. There are good reasons for wanting to question these traditional presumptions (and, indeed, the theorems upon which they are based), but discussion of these will be held over until later sections (Sections 5 and 6 respectively). For the moment, I work within the standard framework and focus essentially on the question of allocative functions of government.

2.1. Correspondence and decentralization

The classic statement of the case for decentralization is contained in Wallace Oates' (1972) treatise on fiscal federalism, in which he draws together ideas articulated less formally in earlier work (e.g., Stigler 1957, Musgrave 1959) in the form of the dual notions of *perfect correspondence* and the *decentralization theorem*.

If there exists a variety of 'public goods' (i.e., in their purest form, goods for which units, once produced, can be fully and equally shared by 'groups' of individuals: see Samuelson 1954, 1955 and Burns and Walsh 1981) which have different spatial benefit boundaries, or for which different sub-sets of the population constitute an optimal consumption group — that is, we can distinguish between, e.g., global public goods, 'regional' public goods and local public goods — Oates' perfect correspondence notion suggested there should, in principle, exist a 'level' of government to supply each of these separate public goods. If we assume away preference revelation problems and assume that each level of government is able to impose benefit taxes on the members of its jurisdiction, then with different governments responsible for different public goods, exclusively available to their jurisdictional citizens/voters/taxpayers/ service beneficiaries, optimal outputs would be produced in each 'region'. Of course, in practice such a structure of government is entirely unlikely, but at least as a benchmark for the development of a second best structure, the perfect correspondence theorem provides a picture of why a public sector structure with a variety of sub-federal governments, as well as a federal or central government, might *a priori* be appropriate. Olson's (1969) 'equivalence principle' conveys a similar message, suggesting the matching of benefit groups with political, or fiscal, accountability groups.

What has never been entirely obvious, however, is why a system of lower level government is strictly required by considerations of the spatial dimensions of public goods (or, more generally, of consumption clubs). If a central government could identify the differing demands for local public goods in different regions and provide correspondingly different quantities, then it could, in principle, achieve an efficient outcome too. To make a convincing case for federalism something more than perfect correspondence (or any practically feasible approximate correspondence) is needed.

This additional requirement is provided by Oates (and many others) by the introduction of a uniformity constraint on government provision of public goods and services. If governments are constrained to supply more-or-less uniform quantities of any service they provide, and preferences differ systematically between regions for quantities of public goods, then a central government will be unable to meet the different requirements of different regions for local public goods. Oates' decentralization theorem then follows more or less immediately. It will always be more efficient (or at least as efficient) for local governments to provide the preferred levels of output for their respective jurisdictions than for the central government to provide any specified and uniform level of output across all the jurisdictions.

Clearly, Oates establishes his case for decentralization essentially by imposing an *assumed* constraint on the capacity of higher level government to respond to differences in local preferences. In principle, it would be preferable for the uniformity constraint itself to be deduced from some aspects of political decision-making that require governments to behave in this way. However, standardization of services provided by governments does seem to be observed in practice, and might well be explained as a result of political decision-making processes (such as would be implied by application of the median voter rule).

Nonetheless, the decentralization theorem, strictly speaking, only holds when comparing a first-best decentralized solution with a second-best centralized solution. We know there are likely to be market failures associated with decentralization itself. The most important and well documented of these are benefit or cost spillovers between jurisdictions (because correspondence can't be made perfect), which may not be internalized in federal systems. If there are significant externalities associated with decentralized provision, then Oates' decentralization theorem provides a less than full justification for a decentralized fiscal decision-making structure.

Oates' treatment of the question of 'why decentralize?' has been embellished in a number of ways by a number of authors. For example the development of the theory of club goods (see, for example, Cornes & Sandler 1986) has provided a much more rigorous analytical treatment of the notion of the correspondence principle and the related decentralization theorem. In a somewhat different direction, the idea that decentralized decision-making brings 'government closer to the people' has been given a formal treatment within the literature. In Tresch (1981) it is suggested that not only might governments be imperfectly informed about the preferences of citizens but that governments which are more distant from citizens may be subject to greater uncertainty about information. In this event, the expectation would be that governments closer to the people would be likely to produce outputs of local public goods and services closer to those required by their preferences, even if higher levels of government were not subject to the uniformity constraints suggested by Oates. Of course, as Tresch himself notes, while uncertainty may be a more compelling argument for fiscal federalism, it is in the end merely another variant of the inherently second best nature of the decentralization theorem.

Another important line of argument supportive of decentralization, and which more fully accepts the difficulties which governments face in obtaining the revelation of preferences for public goods, in fact, predates Oates' work. This is the argument of in Charles Tiebout (1956), who hypothesizes the existence of a significant number of local governments offering different menus of service levels and taxes, and suggests that if people move between local jurisdictions to that which best matches their preferences for public services then, in effect, preferences for local public goods will be revealed and an efficient sorting of individuals between jurisdictions will occur. Subsequent literature has identified a number of provisos that need to be made to Tiebout's analysis, including recognizing the fact that decisions by individuals to move can create 'fiscal externalities' (for more on this, see Section 5). Nonetheless, within a framework of consideration of decentralization of fiscal functions, his emphasis on mobility and implicit forms of competition between jurisdictions contains valuable insights.

In a more recent analysis which departs completely from the standard assumptions of the fiscal federalism literature, Brennan and Buchanan (1980) provide an alternative rationale for federal structures. In order to test 'worst possible' outcomes against which political and fiscal constitutions need to protect citizens from potentially coercive governments, they model governments as revenue maximizing leviathans. One effective constraint on the taxing powers of a leviathan central government, they suggest, would be to disperse at least part of its powers to a number of competing sub-national jurisdictions. Interjurisdictional competition — in particular, tax competition — constrains the revenue-raising capacity of competing governments relative to the revenue that might be raised by a monopoly central government. Although a number of challenges have been made to the Brennan and Buchanan hypothesis (especially empirically: see Section 7), it certainly is highly suggestive and, of course, strongly redolent of the arguments of the founders of the American Constitution in their consideration of the design of good government.

It is in these, and other related ways, that the existing fiscal federalism literature has tackled the question 'why federal-type fiscal structures?' As will be clear in later sections, the approaches to the question of fiscal structures which have flowed from decentralization theorems do offer some useful insights, even where the question 'why decentralize?' is not directly a relevant question. Nonetheless, it does seem important and useful to recognize that the question to be posed for Europe, and for the Soviet Union, is largely the opposite — why 'federate', or why centralize functions?

2.2. Towards a theory of federation

To an extent, the answer to this question can be derived simply by turning the traditional analysis on its head and observing that there are advantages from public goods which provide benefits across a number of jurisdictions being provided jointly in some cooperative or central arrangement, rather than separately in individual jurisdictions; or that leaving public sector decisions entirely to independent autonomous political units can result in a failure to take into account interjurisdictional (cross-border) spillovers. However, it seems useful to attempt to formalize this notion somewhat and put it into a broader perspective concerning the advantages of creating 'unions' of states, whether they be federal or confederal (or even unitary, but multi-level) in nature.

Indeed, many federations have been created essentially from the bottom up — from autonomous political and economic jurisdictions making an explicit decision to create a union — and therefore can be thought of as voluntary coalitions of semi-autonomous entities. Setting aside a wide variety of purely political and cultural aspects, federations, confederations or unions more generally typically are born to take advantage simultaneously of a number of economic and social benefits that can flow from their creation. These include the benefits of internal free trade and a common external tariff associated with customs unions, the wider benefits that can be reaped by the establishment of an economic union with a 'single market', and single currency, and the benefits to be reaped, ultimately, from providing some public sector goods and services in common for all constituent units of the union.

A recent analysis of the costs and benefits of 'federation' (which can be thought of as a parable for all of these potential sources of benefit) is provided by Petchey and Shapiro (1991). They examine the trade-off between a benefit to federation in the form of jointness economies in the provision of supranational public goods and associated tax price benefits, and a cost of federation arising from uniformity of centralized provision of the public good, post-federation, arising from the assumption that the level of public goods output is determined by reference to the median federal preference.

Uniformity of centralized provision of public services implied by use of the median voter rule to determine their output imposes costs on regions that are distant from the median in their preferences. The less dissimilar regions are in terms of preferences over public goods, the smaller is the uniformity cost of federation that needs to be set against the potential jointness efficiencies in the provision of the public good. Over some ranges of preferences, the tax price benefit outweighs the uniformity cost and all regions can gain directly from federating.

However, if there is sufficient diversity in preferences, some regions may be net losers from federation, despite there being a federal surplus (or excess of benefits over the sum of what regions can obtain outside the coalition), or some may obtain shares in the benefits of federation which are regarded as 'too small', and can only be enticed into, or retained in, the coalition through compensating transfers from other participants in federation. Petchey and Shapiro thus argue not only that federation results from voluntary choice through the generation of a federal surplus, but that also transfers between members of the union may be important (and, indeed, necessary) for the cohesion of the federal system, and the more so the more diverse is the set of federating regions in terms of preferences or other dimensions.

Although based on an examination of the benefits from 'federal' provision of public goods, the Petchey and Shapiro analysis evidently could be reformulated to apply to other potential sources of benefit from the formation of unions, whether these be from the formation of customs unions or economic unions more generally. Indeed, the modelling of unions explicitly as a cooperative arrangement between potential constituent members may offer powerful insights not only into incentives to form unions but also into the 'constitutional rules' or logical steps required to carry union from one stage to another.

For example, it might be possible to explain such phenomena as 'constitutional' requirements typically imposed on federal governments that they apply their tax powers on a non-discriminatory basis across the constituent states, notwithstanding the fact that differential taxation is a way in which asymmetries in the benefits of 'union' could be corrected, in terms of a desire to minimize the capacity of the central government to discriminate between tax payers in different jurisdictions as a way of increasing the size of its revenue — that is, to avoid exploitation. On the other hand, giving to the central government a power to make grants to other jurisdictions which itself can be used in a discriminating way between jurisdictions might be *necessary* in order to ensure that interjurisdictional transfers for securing the stability of the union are capable of being implemented, and *acceptable* because, compared to discriminatory taxation, discriminatory grant-giving involves a high degree of openness and, hence, accountability.

Similarly, 'constitutional' rules governing access by different 'levels' of jurisdiction to different tax bases, or requiring harmonization of bases or revenue sharing, might be modelled in terms of trade-offs between the efficiency gains from coordination or centralization of tax instruments, the need to facilitate equitable shares in the benefits of forming an economic and/or political union, and the need to constrain potentially exploitative behaviour by the 'central' jurisdiction or coalitions of jurisdictions. These decisions, moreover, cannot be separated from those concerning allocation of spending and regulatory functions, which also can be made more or less exclusive or concurrent.

Such considerations also would provide a theoretical basis for considering issues of disunion, or secession. Indeed as James Buchanan (1990) has emphasized in recent times, a power to opt out, or to veto arrangements, may be the only way of ensuring that the central authority within federal-type arrangements is ultimately capable of being restrained. At the same time, the existence of the secession mechanism will tend to ensure that it is never used, except in pathological cases.

It is particularly to be emphasized here (and will be relevant to other considerations later) that the nature of political decision-making arrangements associated with the unions being analyzed have an important role. One of the weaknesses of the extant fiscal federalism literature is that the political model underlying analysis is left implicit and frequently has no discernible real world counterpart. What is reasonably clear, however, is that (based on dominant historical patterns in western societies) it is typically presumed that some form of representative *democratic* government (parliamentary or congressional) exists at all levels of decision-making. Consideration of other decision-making processes (e.g., confederal with veto and/or qualified majority voting, with varying degrees of involvement for representative assemblies, as in the EC case) may alter the analysis of appropriate divisions of powers between jurisdictional spheres considerably.

3. ALLOCATIVE FUNCTIONS IN FEDERAL SYSTEMS

Whichever way one approaches the issue of the benefits of federal systems, there is broad general agreement that the reasons for federal or multi-level fiscal arrangements derive from the fact that there are net ('jointness') efficiency benefits potentially to be had from distributing functions across governments with more, or less, inclusive jurisdictions over voter/taxpayers.

As noted earlier, discussions of the distribution of functions within a federal system have been focussed largely on allocative functions of government. Distributional and stabilization functions of government have not been ignored entirely, and in recent times the debate about the appropriate location of responsibilities or competences for distribution and stabilization has been reopened. For the time being, however, the focus remains largely on allocative functions of government. This is not to imply that issues of allocation, distribution and stabilization can be completely separated but, to the extent possible, I will focus on issues that arise in the context of attempting to decide how allocative expenditure (and, to a lesser extent, regulatory) activities are appropriately divided between governments, with interrelated distributional issues discussed only where necessary.

3.1. The allocation of expenditure functions: spillovers and coordination

It is well known that the basis on which the allocation of expenditure functions between spheres of government has been discussed and prescribed within the fiscal federalism literature is to be found in consideration of the extent to which public goods benefits extend across the borders of constituent unit states; of the extent to which externalities generated by public sector activities or by other economic agents in one constituent state create cross-border spillovers; and the extent to which increasing returns to scale in the provision of public services suggests that provision by each jurisdiction separately would be inefficient.

Taking public goods provision as the paradigmatic case, it is suggested that where provision of the public good provides benefits that are national (or, in the European Community's case, supranational) in scope, then provision by a central authority would be appropriate, provided preferences about the provision of the public good are not too widely dispersed. (Defence and foreign relations are the usually cited examples, though minimum standards of social security provision also sometimes are presented as providing national or federal 'stability and cohesion' benefits.)

On the other hand, where public goods provide more localized or regionalized benefits, the standard presumption is that they are more appropriately provided at local or regional level (usually, at least in part, on grounds that preferences will be better revealed when decisions are made closer to the people). This remains true even where the benefits may, to an extent, spill out to other jurisdictions as, for example, would be the case for the provision of regional roads that would be used by members of other jurisdictions or the provision of education where the recipients of education funded by one jurisdiction might move to work (use the public sector funded human capital embodied in themselves) in another jurisdiction.

Basically the presumption here is that the degree of coordination required to secure efficient decisions by jurisdictions — coordination that would be secured, for example, by the provision of subsidies from a central fisc, or directly by negotiation between jurisdictions, where under-provision is otherwise likely — would not warrant a transfer of the function to a higher level of government. That is, that the costs of coordination are presumed to be smaller than would be the efficiency losses from having a higher level of government provide the service uniformly across all jurisdictions.

Much the same can be said for the other categories of decision-making failure likely to arise in federal systems — that is, the more general case of externalities or spill-over effects between jurisdictions, and the case of increasing returns to scale. Indeed, the increasing returns or economies of scale argument brings into particularly sharp focus the fact that it is not strictly the case that problems of coordination require the intervention of a higher, more inclusive level, government. There is no reason, in principle, why public services subject to substantial increasing returns to scale should not be organized cooperatively between a number of jurisdictions in order to reap between them whatever available economies exist, and there is indeed evidence of this happening voluntarily (especially among local governments). As in other 'bargaining' contexts where 'free-rider' strategies may be potentially beneficial to individual participants, the number of relevant jurisdictions will be a crucial variable in relation to the efficiency of the outcome of such negotiations.

The concept coordination costs evidently must play a significant role in these decisions. It is a concept which in the traditional fiscal federalism literature has received less emphasis than it perhaps deserves, and certainly less emphasis than it already appears to receive in discussions within the European Community.

Indeed, the concept of *subsidiarity* now widely used in the Community — which can broadly be taken to imply that no government intervention at the central level is justified if activities undertaken at constituent state level involved no significant cross-border spill-over effects — requires that considerations of coordination cost, as well as the costs of imposition of uniformity associated with centralization and increasing difficulties for citizens of individual jurisdictions to effectively signal their preferences, also are taken into account in order that the principle of subsidiarity can be given real operational content where cross-border effects *are* present.

3.2. Organizational costs and the division of functions

The only analysis in which coordination costs, among others, are given serious consideration in attempting to analyze the appropriate organization (and reorganization) of functions within federal systems is that by Breton and Scott (1978). They consider how a constituent assembly (under different assumptions about its *modus operandi*) would make decisions about the distribution of functions between spheres of government taking into account, on the one hand, the costs to citizen/voters of signalling and mobility associated with different public sector structures and, on the other hand, both internal administration costs and interjurisdictional coordination costs associated with those same alternative structures. In sum, these can be referred to as 'organizational costs'.

Mobility and signalling costs to citizen-voters are likely to lower under more decentralized distributions of functions; but coordination and (possibly) administrative costs (which also ultimately are borne by citizen-taxpayers) are likely to be greater. With sufficient information, a cost-minimizing calculus for the division of functions could be applied. However, not only is the possibility of computing such solutions practically infeasible, decisions about the allocation of functions in fact are made through various forms of constituent assemblies where political interests are represented.

In forums where politically motivated actors can influence the allocation of functions, Breton and Scott suggest that total organizational costs will influence the outcomes only indirectly — through their effects on citizen-voters and consequently the probability of re-election of politicians. Higher level jurisdictions will tend to over-purchase electorally attractive functions from lower-level governments, and the more so the less competitive and broadly representative are the intergovernmental forums in which such trades occur and the more relatively productive are the revenue sources available to higher level governments. State parliaments are likely to over-centralize functions from subservient local governments to a higher degree than are federal governments from 'equally' sovereign sub-federal jurisdictions through intergovernmental forums.

As with the more conventional fiscal federalism literature, which largely ignores coordination costs, Breton and Scott's analysis does not offer a simple recipe for deciding which expenditure functions within the allocative branch belong to or are likely to be transferred to which level of government independently of a careful analysis of circumstances on a case-by-case basis. Nonetheless, it does warn against simple prescriptions readily applicable to all countries in all circumstances. Moreover, their analysis particularly warns against simplistic appeal to optimizing (cost-minimizing) solutions: constitutions — and, more importantly, their evolution — are shaped by (usually political) actors whose preferences and interests influence the outcomes, too.

The peculiar nature of EC institutions *vis-à-vis* more familiar federal, or 'unitary' but multi-level, structures once again make application of this kind of analysis more complex. However, two particular features of current EC arrangements lead to some possible, if tentative, conclusions. First, in the constitution-shaping forums of the EC (Councils of Ministers and ultimately the European Council), there is no explicit political representation of Community level interests. Procedural arrangements give the Commission, and to a lesser extent the European Parliament, a role; but the principal political interests reflected in decisions are those of member state representatives. Second, the EC level, under current budgetary arrangements and policy inflexibilities, is resource poor, relative to central governments in federal of other multi-level systems.

In these circumstances, Breton and Scott's conclusions for conventional federal system might be expected to be inverted for the EC: there may be 'too little' centralization relative to that which would minimize total 'organizational costs'. Relaxing the resource constraints on the Community level, and increasing the direct representation of Community-level political interests in 'constitutional' decisions, would redress the balance, though at the risk of facilitating circumstances in which over-expansion might occur.

Further development of this line of analysis may be a fruitful source of further, reasonably sophisticated, analysis of EC institutions and functions, building on the concepts of subsidiarity principles and democratic deficits. Combined with additional analysis of the force of voting rules in intergovernmental forums, and of opt-out provisions and the like, it may suggest frameworks which allow more flexible decision-making while protecting against the tendency towards centralization to which federal systems are frequently claimed to be subject.

3.3. Evolution of federal arrangements, and competition

At a more general level, a number of other observations might be made about the allocation of functions — emphasizing, in particular, the processes of evolution of federal-type arrangements, and the role of competition in federal systems.

In the early stages of the evolution of a 'federal-type' arrangement, EC-style, it may well be that some functions which in more mature federations have been transferred to the central fisc appropriately remain at the level of constituent state decision-making. For example, even in the case of defence and foreign relations, preferences of constituent member states may be sufficiently diverse that attempts to centralize and provide uniform levels of service may impose excessively high costs on members, notwithstanding the substantial tax-price or other benefits that conceivably might arise.

Similarly with social security functions, which in mature federations typically tend to involve a substantial (if not always exclusive) role for the central fisc. Provided minimum standards of social security provision are met, sufficient to secure social stability and cohesion within constituent states, relative lack of homogeneity of redistributional preferences and relatively limited mobility *may* suggest that, in terms of both the costs of uniformity and the costs of coordination, the case for centralization initially is weak. Over time, community preferences may converge or the perverse consequences of mobile populations where there are substantial differences in redistributive policies between jurisdictions might ultimately dictate that there be some central coordinating or harmonizing role in relation to at least some aspects of social security, even if the entire function is not transferred to a central authority.

On the other hand, considerations relevant both to economic union, and to broader consideration of cross-border economic and social spillovers seem likely to dictate that a higher degree of coordination be secured at an early stage in the formation of 'unions of states' in relation to some expenditure (and regulatory) functions where principal responsibility will (and arguably should) remain with sub-federal jurisdictions. Particularly obvious cases include integration and harmonization of transport networks (road and rail), and of communications and energy production and transmission networks, where both interjurisdictional spill-over and scale economy considerations apply. Even here, however, the necessary extent of the involvement of the federal or central decision-making level in negotiating agreements and/or providing specific purpose subsidy inducements is an open question: the potential benefits to the (sub-federal) constituent states suggest coordination costs may not be excessively high for 'voluntary' integration or harmonization.

It might also be the case that problems of limited appropriability by sub-federal jurisdictions of the benefits of public sector support for research and development and/or probable economies of scale in, or of coordination of, research and development activities suggest similar needs for 'federal' involvement in facilitating interjurisdictional agreements, and possibly in subsidizing coordination efforts. Likewise, and arguably more strongly, interjurisdictional (and ultimately global) aspects of environmental management and protection strategies strongly suggest a role in intergovernmental coordination arrangements for the federal level. More speculatively, but the more so the greater the desire for social and/or political aspects of union, aspects of education policy — especially at higher education level — including both spill-over effects in the usual sense (e.g., from research) and a desire to break down 'cultural' barriers might also appropriately be harmonized and subsidized through the central decision-making mechanisms and central fisc.

In a general sense, the underlying thrust of the discussion in the fiscal federalism literature of the distribution of allocative functions between levels of government is to emphasize the need to balance, on the one hand, advantages from centralization of some functions in the interest of obtaining jointness efficiencies and/or reduced organizational costs discussed at length to this point, with, on the other, to allowing for as full expression as possible of regional diversity in preferences, experimentation in policy approaches and indeed, competition between constituent states.

As was noted earlier, the notion of competition as providing a rationale for decentralization was promoted by the seminal contribution of Charles Tiebout (1956). The concept of competition he had in mind involved the capacity of individuals to 'vote with their feet' — to choose jurisdictions which best met their preferences — as they might, for example, in considering alternative locations for themselves among local government districts proximate to their employment. Competition and mobility in this Tiebout sense has constituted the basis for an extensive literature on local public economies, and their efficiency implications, which is briefly discussed later.

However, in more recent work, Albert Breton (1987) has introduced another concept of competition in federal systems which has even more general applicability. In Breton's work, competition refers not so much to the choice by individuals between sub-federal jurisdictions, nor to the static concept of price and output competition used in much economic theory, but rather to the more Schumpeterian concept of entrepreneurial competition. That is, he has in mind competition between political jurisdictions, including at different spheres or levels of government, in the development of policies to satisfy preferences of their citizen/voters.

The full ramifications of competition in this sense have yet to be worked out. However, one feature of federal-type arrangements and of the traditional fiscal federalism literature to which it particularly draws attention is the question of the extent to which functions are divided neatly and separately between spheres of government as opposed to being shared, concurrently, by jurisdictions. The traditional fiscal federalism literature clearly paints a picture of a relatively neat and tidy allocation of functions between different levels or spheres of government, for example, defence at one level, education at another, the provision of local roads at another, and so on. Both in practice and in principle there seems no reason for supposing that a neat and tidy allocation of non-overlapping functions is either likely or indeed, desirable. Conceptually, for example, there is no reason why citizen/voters should not have the choice between sending their children to schools provided by regional government or national governments any more than there is reason to preclude them from choosing between a government-funded education on the one hand and privately provided education on the other.

Federal-type systems make individuals citizens and voters in several overlapping jurisdictions simultaneously. They will attempt to persuade any or all of these jurisdictions to meet what they perceive to be their needs, and we can expect competition between spheres of government for political support to result in their wanting to satisfy the needs of at least decisive groups of voters irrespective of notional or constitutional allocations of responsibilities.

The apparent preferences or expectations of economists and public administration specialists notwithstanding, the *de facto* allocation of expenditure functions and of policy-making more generally within multi-level government systems will not obey simple rules that ensure neatness, tidiness and smoothness. Nor, indeed, do appropriately interpreted political principles suggest that neat and tidy separations of functions are desirable. Appropriately conceived, federal principles suggest *sharing*, as well as division, of functions between governments, as a means of strengthening political checks and balances through interjurisdictional competition.

The word 'competition', which in standard economic analysis has substantial connotations of virtue associated with it, in analysis of federal fiscal arrangements often has been taken to imply waste and inefficiency, overlap and duplication and, ultimately, attempts by governments to steal a march on one another in inefficient and inappropriate ways. This is particularly often the case in discussion of regulatory functions of sub-national governments and a brief discussion of some recent literature on regulatory functions and competition may be appropriate to dispel some of these suppositions.

3.4. The allocation of regulatory functions

It is beyond the scope of this paper to discuss the general issue of where regulatory approaches to public policy are appropriate. Moreover, the question of the distribution of regulatory functions within federal systems has not been extensively discussed in the literature despite the increasing incidence and importance of regulation. However, recent papers dealing with environmental regulation in federal systems offer some insights which may be valuable to discussion of regulation more generally. In any event, given the efforts of the European Community to harmonize environmental policies, the relevance of the discussion will be partly self-evident.

It seems reasonably clear that, as in other contexts, where there are substantial interjurisdictional spillovers associated with pollution, or environmental damage in other forms, some coordination or harmonization of policies is appropriate and desirable. However, for a number of problems, the benefits and costs of environmental control are likely to be regional or even quite localized and, in principle, it would appear likely that the *efficient* level of environmental control would vary between jurisdictions. Nonetheless, it often has been argued that local or regional jurisdictions would be likely to adopt inappropriately lax standards and controls in an effort to attract investments, jobs and incomes (Cumberland 1981).

Oates and Schwab (1988, 1989) recently have produced two papers in which they have explored the likely outcomes of interjurisdictional competition in the setting of environmental standards. In the first of these papers, they examine the implications of local decision-making designed to maximize the welfare of current local residents, and conclude that local fiscal and regulatory decisions need not be a source of distortions in resource allocation, notwithstanding the potential for competition between jurisdictions. In the second, they include consideration of the well-being of future generations. Again, however, they suggest that local decision makers make efficient decisions such that the welfare of future generations is taken into account. This is the result of the fact that present generations have an incentive to take into account the interests of future generations because the present value of land takes into account prospective environmental quality.

Oates and Schwab concede that their results are capable of being undermined in some circumstances. For example, budget maximizing bureaucrats or politicians may set local tax rates too high, and establish environmental standards that are too low, in order to attract more business investments and expand the local tax base. Moreover, contests between groups in the community with varying interests or values attached to economic development and environmental quality can result in inefficient outcomes, although there is an equal chance that the outcomes would involve too much environmental control as too little.

However, the mechanism which generates efficiency in their basic model, namely the fact that prospective land values have an impact on local decision-making, clearly is a phenomenon applicable to local decision-makers, but not those at central decision-making levels. That is, in their models, the presumption that future generations are taken into account is one that is to an extent enforced by market-type mechanisms; the frequent claim that central decision-makers are more likely than their local counterparts to take future generations appropriately into account does not have such an obvious equivalent self-enforcing mechanism.

While Oates and Schwab's analysis is far from definitive, and restricted in its immediate application to environmental policy considerations, it clearly provides the potential basis for a much more general application of the principle of fiscal federalism to regulatory issues. And, as in the more general exploration of tax competition in the literature (see, for example, Zodrow & Mieszkowski 1986, Mintz & Tulkins 1987), it suggests a much less pessimistic view of the outcomes of interjurisdictional competition than often has been expressed on the basis of casual analysis.

4. THE ASSIGNMENT OF TAXING POWERS

Parallel with, and clearly related to, the question of the appropriate division of expenditure and regulatory functions in a federal system are questions about the appropriate assignment of taxing powers to varying spheres of government. This issue is more fully the subject of a companion paper (Spahn 1992) and is considered here only briefly for the insights relevant to more general analysis of functions in federal systems.

An attempt to use casual observations of current practices in federal systems as the basis for deducing something about the appropriate principles of tax assignment would be confounded by the fact that virtually every sort of tax is used by each sphere of government somewhere. There are, nonetheless, some regularities (over and above the fact that customs duties are allocated to the centre). For example, the more progressive elements of tax systems tend to reside predominantly at central or federal level; and, at local government level, property taxation and user charges are the most common form of revenue raising. On the other hand, in some countries (for example, Germany) revenue sharing is a distinctive feature of tax assignment; in others, very clear separation of access to tax bases occurs (for example in Australia, where the income tax currently is exclusively in the hands of the central government); and, in yet others, extensive tax base sharing is prevalent, with two or more spheres of government having either independent (e.g., US) or harmonized (e.g., Canada) access to one or more of the major tax bases.

Constitutional provisions, judicial interpretation of those provisions and political deals all intersect to explain the different ways in which access to tax bases is arranged or shared in various federal countries. Clearly, no one set of principles would be capable of capturing all of the relevant influences.

The fiscal federalism literature, nonetheless, has established a broad set of principles for what it regards as the appropriate assignment of taxing powers in multi-level government systems. Two factors which feature substantially in the discussion of the allocation of taxing powers in this literature are mobility of taxpayers or tax bases on the one hand and, on the other, especially in more recent literature, the possibility of tax exporting by jurisdictions.

So far as mobility is concerned, the principal issues revolve around the consequences for location of individuals when jurisdictions use the tax structure to achieve redistributional purposes (see Section 5, below) or of the location of businesses where jurisdictions tax income from capital. As a general principle, taxation of highly mobile tax bases and the use of relatively progressive taxes, it is suggested, should reside with higher rather than lower levels of government in order to avoid distortions of locational decisions. Tax exporting, on the other hand, occurs when, through its market power in relation to the production and pricing of particular commodities, a jurisdiction can raise a substantial part of the revenue for expenditure on local goods and services from taxes which are effectively paid by residents of other jurisdictions. Recent literature (e.g., Mieszkowski & Toder 1983; Wildasin 1984; Gerking 1981) suggests that even where tax exporting is possible, it may be less a source of distortion than traditionally had been assumed, either because it affects only average tax prices or has offsetting general equilibrium ramifications.

Both of these problems, mobility and tax exporting, could be avoided if governments were able and willing to rely predominantly on benefit taxes and user charges. Indeed, throughout the public finance literature, the preferred tax arrangement is one in which benefit taxes or user charges are applied as extensively as possible. Because of preference revelation problems, however, the use of benefit taxation other than in proxy form is unlikely to be applicable to those goods which have characteristics of being, broadly speaking, national public goods. On the other hand, neither tax exporting nor mobility is likely to be such a significant problem the higher the level of government at which taxes are applied: the greater capacity of lower levels of government to rely more on user charges turns out to correspond to the principles of tax assignment in federal systems.

A useful summary of the principles established in the traditional literature relating to tax assignment in multi-level government systems is provided by Richard Musgrave (1983). Broadly speaking, they imply:

1. Because of the incentives they potentially create for migration among jurisdictions by the poor and by the relatively rich, highly progressive taxes are best allocated to higher levels of government.
2. Because of their capacity to distort the location of economic activity, highly mobile tax bases, such as taxes on company incomes, generally also should be allocated to higher rather than lower levels of government.
3. Lower levels of government most appropriately should use taxes on relatively immobile bases (e.g., land) and user taxes and fees because they create, in principle, no distorting incentives.
4. Tax bases that are distributed across jurisdictions in highly unequal fashion (e.g., on natural resources) in principle should be centralized to avoid both inequities and allocative distortions that arise from local or regional taxation.

Clearly, not all of these principles have always and everywhere been applied in the development of tax systems. Nor would one expect that newly forming unions would be totally enamoured of the full application of these principles, in particular, perhaps, those which suggest that unequally distributed bases and progressive taxes should be handed over to the central authority. On the other hand, harmonization of tax bases between constituent units and agreements, where necessary, to equalization of tax shares in the funding of central activities can act as alternatives to assignment on Musgravian principles. Further, higher sub-federal levels of government would have relatively high freedom of choice of tax bases under strict application of the principles.

Other considerations, moreover, suggest alternative assignment principles. Competition between jurisdictions for access to tax bases, in particular, can have a useful effect in constraining the potential exercise of exploitative power (Brennan & Buchanan 1980; McLure 1986); and harmonization of tax bases is not an unambiguously good thing in all circumstances: the other side of the harmonization coin is, in effect, the formation of a revenue-raising cartel that can help artificially to reduce the political costs to its members of raising revenues.

Ultimately, of course, the question to be posed is, how large are the welfare losses which might arise from an 'inappropriate' allocation of tax bases; how large are tax-induced distortions? Empirical studies of this issue as yet are limited in availability. An important study by Mieszkowski and Toder (1983) of the distortions which arise from decentralized taxation of energy resources in the United States suggest that the efficiency losses amount to about 4% of energy revenue. Although their analysis and the estimates contained in it are surrounded with provisos, they do not suggest distortions of particularly great significance.

In a more recent analysis, Goodspeed (1989) has examined the use of redistributive taxes at the local level in the context of a general equilibrium model of a metropolitan region. Comparing the efficiency and redistributive consequences of local income taxation with the alternative of local head taxes, he suggests that local governments can employ progressive income taxes with relatively small efficiency costs, implying that the constraint on local use of progressive taxation claimed by supporters of the traditional Musgravian-type principles of tax assignment may be somewhat overstated.

Overall, without discounting entirely the value of the discussion of tax assignment principles that has occurred in the traditional public finance literature, it would have to be said that the practical guidance offered to newly emerging unions, or to reform of tax assignment principles in established federal or multi-level government systems, is relatively slight. From an efficiency perspective, it may be relatively more important that the bases which governments use, however they may be assigned between them, should be as broad-based as possible, than that they should be assigned according to 'traditional' fiscal federalism principles. Even this conclusion, however, would be subject to challenge by those who consider governments to be, actually or potentially, revenue-maximizing leviathans: for them, tax bases as full as possible of loopholes and subject to erosion through mobility would be more appropriate in constraining the capacity of government to coercively extract revenue from the system.

One conclusion which would be common both to models of optimal taxation and to revenue-maximizing models would be that to the greatest extent possible, earmarked taxes based on benefit principles would be most likely to induce efficient decision-making by taxpayers and governments about the appropriate levels of public service provision.

5. MOBILITY, LOCATIONAL AND LABOUR MARKET CHOICE AND REDISTRIBUTIONAL POLICY

A substantial portion of the literature which has emerged in the period since the publication of Oates' (1972) now classic study of fiscal federalism has focussed on the implications of free mobility for the efficiency, and equity, of public sector decisions with decentralized decision-making. Even for mature systems of multi-level government with few geographically concentrated linguistic or cultural divisions, the empirical significance of this literature is unclear: its most potent application appears likely to be in a metropolitan setting with a significant number of local governments possessing substantial expenditure functions. For emerging unions such as the EC, the relevance of mobility *of individuals* (but not of capital) between constituent states for residential and/or labour market purposes may be relatively limited (e.g., to upper and lower work-skill categories) for the foreseeable future, in part because of language and cultural differences. Nonetheless, there already is evidence of some significant labour market mobility, and the emergence of a single currency would increase the ease with which wage and living standard comparisons are made throughout the EC. Accordingly, while only a brief overview of some central aspects of this literature will be presented here (Rubinfeld 1987 offers a survey of the economics of the local public sector, and an overview of some of the main elements of the relevant literature are included as Attachment 1 to this paper), mobility issues seem likely to be of increasing relevance to public finance arrangements in the EC over time.

Much of the literature dealing with this aspect of local public economics stems from the previously mentioned seminal work of Tiebout (1956). He conjectured that in a federation with a large number of regions, each choosing a mix of local public goods and taxes, and with free mobility, the level of provision of local public goods in each region would be optimal with residents located between regions efficiently (an optimal population distribution). However, Tiebout's work was not highly rigorous and he made a number of questionable assumptions. In particular, he assumed that: (i) residents had full information about all alternatives; (ii) the number of regions was sufficiently large that residents had a wide spectrum of regions from which to choose; and (iii) residents' primary incomes were independent of locational choice. The nature of local taxation arrangements also was left largely implicit in his analysis.

Tiebout's conjecture clearly was stimulated by Samuelson's (1954, 1955) claim that people have no incentive to reveal their true preferences for public goods and, indeed, face an incentive to misrepresent them if the taxes they pay depend upon revealed preferences. Tiebout's analysis suggested a mechanism for securing (implicit) truthful revelation of preferences, at least for local (or regional) public goods, deriving from the incentive of individuals to 'shop around' for the region offering the tax and public good mix closest to their true preferences.

In equilibrium, then, at least where mobility costs are low, residents living in a particular region might be expected to have similar preferences, people having sorted themselves by 'type' into various regions. In this way, not only did the problem of preference revelation appear to be solved for local public goods, but also optimal levels of provision, it seemed, would be achieved.

An extensive literature has subsequently emerged on Tiebout's conjecture (see Attachment 1). For present purposes, one of the most significant parts of that literature concerns the question of whether Tiebout-style mobility results in efficient locational choices.

This has been examined in a variety of ways and settings by, for example, Buchanan and Goetz (1972), Flatters, Henderson and Mieszkowski (1974), Wildasin (1980), Boadway and Flatters (1982), Wildasin (1985). While a number of results have emerged, varying with different modelling assumptions, the ones which have taken the most pervasive grip in the literature appear to be:

(i) Free migration can result in non-optimal location decisions where jurisdictions rely primarily on residence based taxes, because movers create fiscal externalities which they have no incentive to take into account (i.e., they lower the per-person tax price of public goods for all existing residents in the location they enter, and raise it in the location they leave).

(ii) The inefficiencies of free-migration decisions can be ameliorated by a system of unconditional transfers, either directly between jurisdictions or through the agency of a central government.

That is, mobility can result in inefficiency in location decisions, and a corresponding case arises *on efficiency grounds* for unconditional interjurisdictional transfers.

In more recent times, the somewhat interrelated question of the role of mobility in shaping or constraining the use of redistributional policies by sub-federal jurisdictions has been subject to renewed analysis. The predominant traditional view in the literature (see Stigler 1957, Musgrave 1971, Oates 1972) has been that interpersonal redistributive policies appropriately should be centralized, because sub-federal attempts to employ redistributive policies are likely to be counter-productive and create inefficient location decisions through a form of adverse selection: the rich (taxpayers) will leave, and the poor (beneficiaries) will be attracted to jurisdictions employing relatively highly redistributive tax and expenditure policies. Indeed, if average incomes differ between jurisdictions even the same redistributional policy employed by all jurisdictions at sub-federal level has the potential to induce migration from low to high average income jurisdictions: only distributionally neutral sub-federal budgets would be migration neutral in this sense. As Brown and Oates (1987) point out in a story which provides evidence of some transfer-induced mobility, any degree of mobility gives rise to a standard presumption of under-provision.

Notwithstanding the apparent force of this argument, in most federal systems, sub-federal governments do play some (and, as in the US and Canada, sometimes quite substantial) roles in redistributional policies. Moreover, there often are persistent differences in the nature of target groups, or levels of benefits offered, suggesting that preferences for redistribution vary significantly between sub-federal jurisdictions, and that giving expression to these differing preferences is not rendered totally counterproductive by mobility.

As Pauly (1973) and Tresch (1981) especially have suggested, there are reasons for expecting altruistic preferences for redistribution to be stronger within local or regional communities than between them, giving rise not only to a case for sub-federal redistribution, but also strong support for it. The arguments for decentralized redistribution are stronger the more dissimilar are tastes, and less mobile are individuals in response to redistributional policy differentials. The balance of arguments within well integrated federal or multi-level systems probably lies with the view that a case can be made for a shared role in relation to redistribution — such as that suggested by King (1984) of having a basic federal or national redistribution policy with sub-federal jurisdictions able to alter the degree of redistribution within limits.

Particularly relevant to the EC's case, perhaps, is the recent analysis by Wildasin (1990 and forthcoming) in which previous models are extended by assuming that some households are mobile within a common labour market in which incomes are endogenously determined. Assuming that 'poor' households are mobile and 'rich' immobile, and that different jurisdictions have different redistributional policies set by the (partially altruistic) preferences of the immobile households, Wildasin shows that fiscal externalities are generated with the subsidy burden reduced in jurisdictions they leave and increased in those they join. The correction of this externality situation requires intergovernmental grants which harmonize redistributional outcomes across all jurisdictions: that is, other things equal, larger grants should go to jurisdictions with weaker preferences for redistribution. (The analysis can simply be reversed for the case of rich mobile households taxed, rather than subsidized, by poor immobile households.)

The case for intergovernmental subsidies, or more generally harmonization of redistributive policies, is likely to increase as EC labour markets become increasingly integrated: but even modest mobility creates inefficiencies in the presence of different policies. The choice of decentralized, but effectively harmonized, redistributional policies in preference to an essentially equivalent centralized system, Wildasin suggests, might be made on the grounds that decentralization might lead to better revelation of information necessary for optimal policy choice. It also might be preferred (see McLure 1986) on the grounds that it minimizes opportunities for governments to use their inherently coercive redistributional powers to reward rent-seeking behaviour.

Even with mobility allowed for, then, decentralized decision-making about redistributional policies may have stronger support than conventionally argued — but within a context where harmonization also is achieved by means of variable intergovernmental grants.

6. INTERGOVERNMENTAL GRANTS, FISCAL EQUALIZATION AND MACROECONOMIC MANAGEMENT

In various ways, and for a variety of reasons, federal and other multi-level fiscal systems typically exhibit a degree of vertical fiscal imbalance — broadly speaking implying that federal or central governments have access to revenue sources more productive than is required for their own purposes, and make interjurisdictional transfers to sub-federal spheres of government to assist them to fund their activities. For example, in 1987, in Australia, federal government transfers to the state/local sector represented nearly 45% of state/local revenues; in Canada, the USA and Germany the equivalent transfers represented, respectively, about 14%, 12% and 20% of state/local revenues.

The extreme dependence of the state/local sector in Australia on federal grants stems from a combination of constitutional interpretations and political decisions which have centralized control over both sales of goods and incomes as tax bases. (See Walsh 1990 for an explanation.) Elsewhere, the (lesser) degree of vertical imbalance reflects political and constitutional arrangements which better align taxing powers with spending responsibilities, while allowing that interjurisdictional transfers can help secure other objectives in federal systems.

Notwithstanding increasing evidence that, in practice, grants systems often are used for political purposes or induce spending effects other than those predicted by the underlying theory, the traditional literature (see, for example, Oates 1972, ch. 3, King 1984 chs. 3–5) identifies three broad purposes for intergovernmental grants in federal systems:

(i) To subsidize specific categories of sub-national expenditures where there are spill-over benefits to those outside the jurisdiction (i.e., where there is 'imperfect correspondence' between the *spatial* distribution of benefits of sub-national programs and the jurisdictional boundaries, such as would apply with the effects of many environmental management programs; interjurisdictional roads systems; and/or spending on education and training). This gives rise to a case for specific-purpose, open-ended, matching grants, designed to encourage an expansion of *output* by the recipient jurisdictions to take into account the spill-over benefits.

(ii) To equalize 'fiscal capacity' between sub-national jurisdictions, where otherwise differences in taxable capacity and/or in the costs of providing public services would preclude jurisdictions providing similar levels of (basic) public services while applying broadly similar levels of tax effort. This gives rise to a case for lump-sum unconditional grants, directed (by formula) to fiscally disadvantaged areas.

(iii) To reap the advantages of having collection of some major tax revenues centralized and harmonized, because of economies in centralized revenue collection, or advantages to efficiency and equity in the tax system, or benefits in the form of improved macroeconomic management capacity. In this case, one government acts, in effect, as a collection agent for others, and the required transfers are unconditional 'tax reimbursement' grants (revenue-sharing is sometimes utilized instead).

Not altogether unsurprisingly, a number of studies have found that, even in the case of so-called 'fiscal equalization' transfers, economic principles and even stated program objectives often provide a less satisfactory explanation of the structure of grant programs, and of the distribution of grants, than do political variables (see, for example, Inman 1988, Holcombe & Zardkoohi 1981, and Grossman 1990). It is not difficult to see that the willingness of central governments to bear the political pain of raising tax revenues greater than those required to fund their own-purpose spending programs in large measure is likely to be directly related to the political advantages — political support — they can obtain from the way in which they disburse those funds in grants to sub-federal jurisdictions.

Equally significantly, the effects of grants on recipients apparently differs from the predictions that flow from basic conceptual models. In principle, an unconditional grant to a jurisdiction should increase public sector spending by an amount equivalent to the increase in spending that would occur if there had been an equal increase in the incomes of the jurisdiction's residents. In fact (see Gramlich 1977) the evidence from a number of studies suggests that the impact of grants is to cause a much higher than predicted stimulus to spending (of the order of 40–50 cents in the dollar) — a phenomenon referred to as a flypaper effect ('money sticks where it hits').

Attempts to resolve this apparent empirical contradiction of the theory of grants have involved suggestions that 'fiscal illusions' are present in connection with grants, because of the complex conduit through which taxes are taken from residents and returned to jurisdictions as grants; that 'bureaucratic power' (especially over information) enables bureaucrats to over-expand program expenditures, and especially powerfully so out of grants; that the relatively high excess burdens of state and local taxation predispose sub-national jurisdictions to spend relatively heavily from grants; and that when full general equilibrium effects of grants (e.g., on local tax bases) are allowed for, the evidence is not inconsistent with fully articulated theory (see King 1984 for a general discussion; and Hewitt & Heffley 1986 for a recent summary and general equilibrium extension).

Once again, however, *political* stories cannot be ignored. As Brennan and Pincus (1991) suggest, observations of the forms of grants (e.g., whether ostensibly matching or non-matching specific purpose, or unconditional general purpose) do not provide complete or reliable information about their conditionality. Implicit agreements between donors and recipients, especially where numbers of recipients are manageably small (e.g., 8 in Australia, 10 in Canada, 12 in Europe), may make general purpose lump-sum grants effectively as 'conditional' as matching grants.

Clearly, there is much yet to be sorted out about the impacts of intergovernmental grants which requires a more adequate modelling of donor and recipient motivations. There is, moreover, an equally important task to be undertaken which focuses more sharply on the effects of grants on the efficiency of public sector decision-making. A brief sketch of what might be said of these efficiency effects is offered below as a prelude to a more thorough re-examination of fiscal accountability, the appropriate roles of government in federal systems, and the *necessary* scope for grants.

6.1. The grants system and public sector decision-making efficiency

Even those who have argued that intergovernmental grants are a reasonable substitute for fully independent sub-federal financing — because they strengthen the federal government's control over macroeconomic and redistribution policy, while permitting decentralization of decisions about spending patterns and priorities — have indicated that their judgements reflect the *net* balance between these benefits and some associated costs. Those costs have been identified as including the loss of decision-making independence by the sub-federal governments, and the blurring of responsibility for the levels and quality of state services and associated inefficiencies in decision-making. The growth of the significance of specific purpose (tied) grant programs also has raised concerns about paternalistic and/or pork-barrelling intervention by higher level governments.

In the analysis which follows, an attempt is made to give these claims about the costs and benefits of the grants system more specific analytical content, and to re-evaluate their relative significance. The focus is principally on the consequences for efficiency in decision-making in the public sector. From an EC perspective, potential interest in these issues runs two ways. The EC's budget is, in effect, substantially derived from grants *from* constituent member states, and a large part of its expenditure is in the form of grants *to* member states.

6.1.1. Grants, tax prices and inefficiency

For a recipient government, the most obvious effect of grants is to lower the *average* tax cost to them of funding any given level of outlays. Whether this translates into an effect on decisions about service levels depends, however, on the impact of grants on the perceived marginal tax price (and hence political cost) of public service provision; and this, in turn, can be substantially affected by the form of the grants themselves.

Consider, first, the case of specific purpose (tied) grants with matching requirements. These grants, in principle, are intended to assist in the expansion of services where cross-border spillouts from sub-federal expenditures may cause underspending (e.g., where people educated by a jurisdiction migrate elsewhere; or where highways receive under-funding because the benefits to other jurisdictions are ignored). In principle, matching requirements are appropriate to reflect the value of spillouts, and the consequent effects on recipient decisions are a planned/desired result of such grants.

However, at least two sorts of practical problems arise. First, matching requirements typically are arbitrarily determined and often set at very high levels (frequently as high as 50/50 sharing). This may encourage *excessive* additional spending on the function and arbitrary distortion of state spending patterns; and it may precipitate the equally arbitrary imposition of caps on the total matching contribution by donor governments (Gramlich 1985).

Second, whether or not the matching rates are appropriate, the lowering of the tax price of service provision not only induces (desired) expansion of service (i.e., output) levels but also facilitates reduced efficiency and increased costs: i.e., all spending, whether on additional outputs or additional inputs, is subsidized by the donor government and the incentives of recipient governments to monitor these effects is diminished relative to the case where only own-source revenues are spent. Increased monitoring by the donor government may help to minimize these costs, but it cannot (efficiently) eliminate them: monitoring costs plus inefficiency costs will be positive.

Clearly, matching ratios are an important decision variable. Reduced costs of productive inefficiency and allocative distortions, as well as reduced need to monitor, can be secured by more careful assessment of the required matching rate — and would be a more appropriate device for limiting donor outlays than arbitrary changes to other program design features or equally arbitrary expenditure caps. Where possible, moreover, output performance, rather than expenditure, should be the matching basis (although identification and measurement of appropriate indices of performance may be difficult, it must be admitted, and use of inappropriate measures of performance can lead to inefficient outcomes).

There is a further problem with specific purpose grants — perhaps particularly pertinent to the EC and its regional development and social fund grants — where 'federal' grants are directed at local or regional programs which also receive funding support from an intermediate level of government. Using models of public goods provision by multiple agents (see Boadway, Pestieau & Wildasin 1989a) it can be predicted that, whether lump sum or matching, grants from the federal level to support regional level government programs will induce reductions in intermediate level government financial support for the program and/or for closely complementary programs (see Wildasin 1990). The assessment of EC regional grants cannot proceed, in short, on the traditional donor/recipient basis, treating other (e.g., national) funding levels as exogenously determined. Although requirements that intermediate governments maintain their levels of support (in real terms?) can help offset these grant substitution effects, it would be virtually impossible to monitor and restrict all possible 'induced effects' on intermediate level government support for complementary and/or substitute activities.

The effects of general revenue grants on efficiency in decision-making are both more complex and more subtle: in particular, they depend importantly on voter/taxpayer perceptions. (This category includes the effects of specific purpose block (non-matching) grants, except where these grants would lead to a larger increase in recipient outlays than equivalent general revenue grants.) In principle, general revenue grants lower the average, but not the *marginal*, tax price of the recipient government's outlays: once the level of the grants is determined (by formula or otherwise), an extra dollar of outlays by recipients must be funded entirely from an extra dollar of own-source revenues.

Indeed, more generally, the lowering of the average tax price is largely an illusion, too, since the revenues to fund the general revenue grants come from tax payments made by residents in the recipient jurisdictions. However, the fact that the tax payments are made directly to one government, and the corresponding grant payments made through an intergovernmental conduit, enables the emergence of a variety of forms of fiscal illusion. It is possible, for one thing, for voters in a recipient jurisdiction to see at least part of the cost of grant-funded expenditure being borne elsewhere. Voters in a jurisdiction which receives, say, 20% of federal grants might see an extra $5.00 of grants as costing them only $1.00. Even when grants are fixed, the fact that they may fund a significant proportion of jurisdictional outlays can be used by sub-federal politicians to persuade voter/taxpayers to believe that the marginal cost of an extra $1.00 of spending in their jurisdiction is less than $1.00 — *conceivably* to a point where the average own-source cost of spending is mistaken for the marginal cost.

A direct empirical test of the fiscal illusion hypothesis underlying these observations has been undertaken for Canadian provinces by Winer (1983), indicating that grants did reduce perceived tax prices and raise provincial expenditures. The effects diminished over time, but did not disappear entirely. Relatedly, though less directly, the literature on the impact of non-matching grants on state/local expenditure (see, for example, Gramlich's review (1977) and Spahn's (1977) work on Australia) indicates that increased grant funding feeds largely into increased state expenditure and very little into reduced state taxation effort (despite the extra federal taxes that must be imposed), and more so than would an equal increase in the incomes of state residents.

6.1.2. Grants and fiscal cartels

Federal systems, it can be argued, should be seen not merely as 'allowing diversity' but, potentially, as providing a framework within which 'competition' between governments is encouraged. In part, this competition can take the form of restraining the coercive use of taxation and other powers (as emphasized by Brennan & Buchanan 1980) and, in part, it can take the form of encouraging and facilitating innovative policy-making (as emphasized by Breton 1987).

Revenue-sharing and other bases for substantial general revenue grants might, in this connection, be seen as a reflection of the existence of a largely implicit revenue-raising cartel, which makes life easier for all governments by minimizing the degree of competition over tax bases, blurring the attribution of responsibility for fiscal decisions and reducing the pressure for genuine creativity in policy-making. As a consequence, competition may be more heavily concentrated than otherwise into considerably less productive forms — for example, over sub-federal shares of federal own-purpose spending (e.g., on big defence contracts), over shares of federal grants, and over subsidies to attract or retain major industries.

An interesting partial and indirect test of this perspective has been provided by Grossman (1989, 1990). Following the arguments of Brennan and Buchanan, he hypothesizes that public sector size (measured by total public sector outlays relative to GDP) will be negatively correlated with decentralization (proxied by the share of state/local *outlays* in total public sector outlays) and positively with (at least implicit) collusion (very indirectly proxied by the share of intergovernmental grants in total state/local *revenues*). For the US, he reports that both hypotheses were supported. For Australia, only the collusion hypothesis is supported — a result which, perhaps, might be explained as implying that the degree of collusion through the very extensive Australian grants system overwhelms any potential benefits of decentralization of outlay responsibilities to the states. Whether or not Grossman's analysis is seen as an adequate test of the presence and effects of a 'fiscal cartel', the fact that he finds a larger share of grants in state funding to be positively associated with increased total public sector size offers support to the general line of argument that the grants system has important consequences for public sector behaviour.

It is to be emphasized, however, that the principal issue is not so much whether the grants system is associated with bigger government, but rather with the extent to which it influences the *quality* of public sector decision-making. On this, the theoretical arguments and empirical evidence point to a strong affirmative answer — stronger than might be deduced from the traditional literature's reference to loss of independence, blurring of responsibility and so on.

The currently relatively modest size of the EC fisc, and the correspondingly limited role of the Community in functions commonly found at the 'central level' in other fiscal systems, may imply a correspondingly lower current level of concern about the impact of grants on decision-making than would be the case for mature federations, or other multi-level government systems. Nonetheless, as economic union and social union proceed, the central fisc will increase in relative size and as it does the concerns expressed here will be of increasing importance.

In following sub-sections, again with an eye largely on existing *federal* systems, I explore what are the appropriate *limits* to the role of intergovernmental grants, using the principle of fiscal accountability as the key requirement. The requirements of fiscal equalization, and of macroeconomic management receive particular emphasis.

6.2. Principles of fiscal accountability and the case for vertical fiscal imbalance

A fundamental tenet of democratic political systems is contained in the adage that there should be 'no taxation without representation'. The power to tax is an inherently coercive power — one which we concede that governments (and governments alone) must possess if they are to overcome the problems associated with ensuring appropriate legal and regulatory structures to guide and constrain private sector interactions, adequate supplies of public goods and services; an equitable distribution of income and/or of opportunity, and reasonable macroeconomic stability. To minimize the risk of exploitative use of this coercive power, however, we construct elaborate systems of 'checks and balances', of which the requirements that governments be popularly elected and subject themselves to regular elections are a vitally important part.

Federal systems of government have the capacity to strengthen the system of checks and balances — especially those contained in parliamentary democratic systems — among other things, by both dividing and sharing political decision-making power. In the process, they give citizen/voters multiple access to government, increase the capacity and incentives for diversity and experimentation in policy responses, and allow the possibility of people 'voting with their feet', as well as through the ballot-box.

At the same time, however, federal systems raise important questions of principle about the link between taxation and representation. It would seem logical *a priori* to suppose that where responsibility and representation is both divided and shared, there also should be a commensurate division and sharing of the power to tax. More specifically, on all fours with the principle that representation should be a prerequisite for taxation, it appropriately can be argued that it is a fundamental principle of accountable and responsive government that, as nearly as possible, **governments which are responsible for expenditure decisions should be responsible for raising the revenue to fund them *and* should have control over, and responsibility for, revenue sources adequate to enable them to do so.** (Elsewhere (Walsh 1991), I have suggested that this might, somewhat loosely, be characterized as the principle that there should be 'no representation without taxation' — the reverse of the old familiar adage.)

The significant issue arising from application of this principle to federal financial arrangements lies not in its acceptability as a basic principle of fiscal accountability but, rather, in the question of what exceptions or modifications to it are required by other principles or practical considerations in the context of federal finances. Three exceptions commonly are asserted, and will form the basis of subsequent discussion:

(i) intergovernmental redistribution and/or fiscal equalization;

(ii) shared responsibilities and specific purpose grants; and

(iii) responsibility for macroeconomic management.

6.3. Intergovernmental redistribution and fiscal equalization

It is generally agreed that workable, cohesive federations require some form of transfer of resources *between constituent units*. These might arise from a variety of sources.

For one thing, a successful and stable *economic union* requires a degree of convergence of economic performance between its constituent elements. In full, mature federations, where federal governments have access to major revenue bases and substantial responsibilities for social security and welfare services, inter-regional differences in economic performance (reflected in per capita output and income) generate substantial implicit inter-regional transfers through the federal fisc: high incomes are associated with relatively high federal tax liabilities and low incomes with relatively high receipts of federal transfer payments and/or welfare services. However, even in mature federations in the absence of corrective measures (and given that member states give up their individual ability to control trade, exchange rates, monetary policy and, to some extent, fiscal policy), the underlying causes of the output and income differences — such as unequal natural resource endowments, different levels of investment in human and physical capital, differences in accessibility, and different degrees of dependence on growing or declining products and industries in national and world markets — can be sustained or reinforced.

In pure (or 'pre-federal') economic unions, lacking the central fiscal processes by which primary income transfers occur automatically in most federations, the need for transfers to secure minimal convergence of economic performance will be particularly great (MacDougall Report 1977). Economic union itself may not create greater divergence: in fact it might reduce it to some extent. Nonetheless, variable specific purpose transfers targeted on variables linked to economic performance (e.g., tied to physical and/or human capital development, especially perhaps education and training) in particular jurisdictions or regions may be required. (As noted earlier, the design of the payment arrangements from the 'central' authority requires careful attention because of their capacity simply to displace contributions by intermediate level governments.)

For another, though somewhat relatedly, while the process of federation, or of increasing union, might produce net benefits to the constituent states in aggregate (a federal or union surplus), it may result in a distribution of those benefits which is perceived to be inequitable. This is associated both with the economic aspects of union discussed above, and with the social and political aspects involving the transfer of spending functions and taxing powers (and regulatory functions) to the federal government, about which regional preferences may differ substantially. Both at 'federation' and subsequently, the case for an equitable distribution of benefits may give rise to the need for compensatory interjurisdictional transfers as part of the 'glue' which holds the federation together. In this more general case, unconditional grants to the relevant jurisdictions are appropriate.

These considerations are likely to dominate in thinking about newly emerging economic, social and political unions — particularly in the case of the European Community, but also in rethinking and reshaping the Soviet Union. Nonetheless, they find continuing reflection even in long-established mature federations. Notwithstanding arguments that fiscal equalization (or fiscal adjustment) transfers to governments, especially if poorly designed, may give rise to sustained grants dependency and/or inappropriate location of people and activity relative to that which would maximize 'federal' output (see, for example, Courchene 1988, 1992), they are to be found to exist and persist everywhere, and frequently with the explicit support of the jurisdictions which are net losers. This, it seems to me, is to be explained by the fact that such transfers are seen as essential to continuing federal cohesion, despite potential efficiency costs associated with them, and that this cohesion role might be put at risk by schemes to make these transfers conditional on performance indicators. Breton (1987), in his analysis of competitive federalism, also emphasizes that continuing mutual support for horizontal equalization by the 'haves' as well as the 'have-nots' reflects their role in facilitating and monitoring horizontal intergovernmental competition.

In part because of its focus on the consequences for efficiency and equity of arrangements within well established federations, in the traditional fiscal federalism literature, and to an extent in the practice of mature federations, emphasis has shifted to other efficiency and equity issues. One strand of this literature focuses on the consequences for *efficiency* of free migration in a federal system. As noted earlier (Section 5), the potential efficiency-improving characteristics of mobility in federal systems are limited by a form of 'fiscal externality' (see, for example, Buchanan & Goetz 1972, Boadway & Flatters 1982 and Wildasin 1986). Where jurisdictions provide local or regional public goods, taxpayers moving from one jurisdiction to another lower the per-person tax price of public goods provision funded from residence-based taxes in the jurisdiction they join and raises it in the one they leave, but have no incentive to take these external effects of their decisions into account. A system of cross-compensating lump-sum interjurisdictional transfers would be required to offset the potential distortions.

Another strand of literature (see Buchanan 1950, 1952, Scott 1950, and Musgrave 1961) focuses instead on issues of 'horizontal' *equity* in federal systems. The different political (taxation and expenditure) decisions and different cost structures in different jurisdictions in a federal system can result, from a national perspective, in individuals in similar economic circumstances (e.g., having the same gross incomes) receiving entirely different net fiscal benefits. Strictly speaking, the implication of this perspective is that a system of *interpersonal* transfers would be required to secure (national) horizontal equity. However, interjurisdictional transfers might act as a second-best approach. This line of argument, which clearly comes *closest* to providing a rationale for fiscal equalization grants of the type found, in most mature federations, is not without its critics. For example, it is claimed that making national horizontal equity comparisons is fundamentally inconsistent with (and their correction would be destructive of) the achievement of regional policy diversity that is a virtue of federal systems.

Whatever may be the origins of, and the basis of intellectual support for, equalization payments in federal systems, in modern parlance, they have come to be articulated in a language which emphasizes 'interjurisdictional equity' as a component of national or federal citizenship. It may well be that, as another aspect of cohesion, as unions mature and 'integration' increases, a preference emerges for ensuring that 'fiscal capacities' of constituent units do not diverge greatly. But at another level, this emphasis on homogeneity and/or common citizenship may detract attention from more fundamental underpinnings — providing intergovernmental federal cohesion and/or establishing and monitoring interjurisdictional competition: the more 'integrated' unions seek to become in social and political terms, the more significant *these* bases for interjurisdictional redistribution become.

Finally, it should be noted that strictly speaking, none of the arguments for 'equalization payments' *require* that the transfers be achieved 'vertically' — i.e., by having the 'federal' level act as the conduit through which 'excess' revenues are collected from some jurisdictions and transferred to others: horizontal transfers between jurisdictions in line with an agreed formula would suffice, and in Germany *part* of fiscal equalization between *Länder* (states) is, in fact, achieved in this way. Moreover, a variety of arguments could be used to support partial, rather than full, fiscal capacity equalization: for example, transfers might be made only to constituent jurisdictions with assessed per capita fiscal capacities more than, say, 10% below the federation average, funded on an equal (per capita) basis by all other jurisdictions (except those more than, say, 10% above the average, which would pay-in to the equalization pool until excess capacity is eliminated). Above all, alternative possible purposes of interjurisdictional transfers should be clearly distinguished (e.g., economic convergence versus equity), and the conditionality of transfer payments shaped accordingly.

6.4. Shared responsibilities and specific purpose payments

As already noted, the fiscal federalism literature has long argued that, even with the best feasible design of jurisdictional boundaries, interjurisdictional spillovers of benefits or costs of regional public sector activities would be likely to occur. In the absence of corrective measures — generally in the form of appropriately calibrated matching grants — sub-optimal decisions are likely to be made by sub-national service providers.

This obviously provides a rationale for specific purpose grants as a further exception to application of the principle that a one-to-one relationship should exist between spending and revenue-raising decisions by all jurisdictions — although, again, the required interjurisdictional transfers do not logically necessitate the intervention of a higher level of government as both judge and implementor of the required grants. Fully articulated, moreover, the spill-overs perspective also provides a possible basis for a critique and rationalization of current practices (see the earlier discussion in 6.1.1. above).

However, notwithstanding the apparent elegant simplicity of the spill-over argument, it is based upon a very narrow perspective of the optimal design of federal systems — one which presumes a neatness and tidiness in the distribution of responsibilities between 'levels' of government that is difficult to reconcile with the claimed political virtues of 'federal' systems in helping to constrain the potential coercive power of governments, and in providing more responsive government to citizen/voters through the multiple access created by their membership of a series of overlapping political jurisdictions.

Once it is accepted that federal systems serve these wider political purposes, a much richer set of intergovernmental interactions must not only be expected, but also accepted as legitimate. If this were not the case, it would be difficult to explain why the constitutions often make some responsibilities explicitly *concurrent* between spheres of government and give the federal level virtually open-ended power to make grants to the sub-federal levels. The explicit overlapping of political jurisdictions arguably is a deliberate design feature of the federal system, not a design flaw, and in any event political competition often will create 'concurrency' in a practical sense when where legally or constitutionally it does not exist.

Examination of the full ramifications of this for the roles and responsibilities of governments and the design of intergovernmental grants would take me beyond the scope of this paper (see, however, Fletcher & Walsh 1991, for example). It certainly would lead, for example, to an expanded notion of federal objectives in what otherwise are regarded as predominantly sub-federal responsibilities, and it would lead to greater emphasis on examining principal-agent problems in the design of intergovernmental arrangements. Moreover whatever the form of and rationale for intergovernmental interactions and arrangements, and associated justification for tied grants as an exception to the principle of directly linking tax raising with spending powers, there are important questions about mechanisms to secure appropriate political (e.g., parliamentary) accountability for agreements often reached principally between executives.

Mechanisms to secure accountability of executives to 'parliaments' for intergovernmental arrangements and intergovernmental institutions are an important requirement, but one often persistently ignored in practice. They provide a particularly important back up procedure where full, direct accountability to taxpayers for spending plans is not possible, but go beyond this, given the wide scope of action that might be approved *between* executives without reference to their respective parliaments.

Precisely what the appropriate scope for intergovernmental transfers is that is justified by all these arguments is difficult to specify, *a priori*: political as much as technical spill-over factors shape the answer. One thing that can be said, however, is that the presumption that there is necessarily a one-to-one link between the *purposes* of grants and their *form* is erroneous. As Brennan and Pincus (1991) point out, extensive implicit conditions might attach to what *appear* to be general purpose grants: the extent of federal 'involvement' in sub-federal decision-making may be substantially greater than appears on the surface.

6.5. Responsibility for macroeconomic management

At least since the publication of Wallace Oates' (1972) now classic treatise on fiscal federalism, which strongly argued the case for centralization of macroeconomic stability functions, there has been a comparative neglect of the issue of federalism and macroeconomic management within the federalism literature itself, and certainly little attention to the question of whether the conditions which supported his case have changed. Equally strangely, there appears to be virtually no discussion, even in Oates' treatment, of what precise implications for revenue-raising powers the centralization of macroeconomic management might have. The standard theorem in the relevant federalism literature — that macroeconomic management is appropriately, and virtually exclusively, a function of central government — was originally constructed on the basis of at least four propositions.

First, it was observed that if monetary policy were allowed to be a local function, this potentially would lead to excessive monetization of debt and there would be serious potential inflation problems: consequently central control of money supply is necessary.

Second, it was observed that local attempts at fiscal stabilization policies (i.e., traditional demand management-type policy) are likely to be weak as a stabilizer because regional economies are much more 'open' than national economies: any attempt by a local economy to reflate itself is likely largely to result in a spillout of expenditure over its borders.

Third, it was claimed that debt financing at a local level is likely to result in liabilities which are largely external to the locality, but national debt less so because national capital markets are better integrated than are international capital markets. To the extent that this is valid, local debt would have a larger impact on future real incomes associated with repayments, and it would be best that local debt be minimized.

Fourth, it was argued that local economies are likely to have highly correlated economic activity levels because they are highly interdependent, so that cyclical movements in economic activity can be expected to be largely national in scope and appropriately tackled by nationwide strategies.

From all of this, Oates concluded that the federal government should take full responsibility for stabilization policy, and indeed asserted that in this respect a unitary system of government is distinctly superior. Musgrave (1959), in his earlier treatise on public finance, had been somewhat less strident, acknowledging the possibility of fiscal policy coordination, but nonetheless clearly asserted the need for primary responsibility at the central level. These arguments have been accepted, more or less without question, since.

Even if we take the four propositions as originally stated (and I do not argue that one should, in their entirety), it is not at all clear what they imply about the desirable size of the central fisc, about the role of intergovernmental grants, or about the allocation of specific tax *bases* between levels of government. It certainly would seem to be the case that *if* a decision is made that use of local debt for counter-cyclical purposes is inappropriate, the central government will, of necessity, be the principal stabilizing authority. Along with this also goes a presumption that the federal government ought to have automatic stabilizers under its control. In terms of the tax system, this principally implies that the progressive *component* income tax system which generates disproportionately large revenues in a boom, and contrary-wise in a slump, ought to be in the hands of the federal government. This can be done, however, without denying sub-federal governments some share of the income tax base on some agreed basis (there may be a risk of the sub-federals stepping in if the federal government were to cut tax rates for macro purposes, but it seems to me that is best avoided largely by negotiation and consultation). There is substantial evidence, indeed, that in federal systems, the 'stabilizers' in the federal fisc play a significant role in offsetting primary income shocks in regional economies, even if their precise magnitude is open to debate (see MacDougall 1977, Sachs & Sala-i-Martin 1989, Eichengreen 1989, 1990, Pisani-Ferry *et al.* 1992, and Goodhart & Smith 1992).

Beyond the existence and availability of automatic stabilizers, the critical requirement for macroeconomic management in federal systems (and economic unions) would seem to be that there be appropriate mechanisms for securing appropriate *coordination* of fiscal policy and possibly appropriate sanctions be available for use where states pursuing independent fiscal policies impose 'excessive' spill-over costs on other regions. Contrary to the traditional glib assertions in the fiscal federalism literature, the presumption that macroeconomic management should be essentially and virtually exclusively a central government function neither corresponds to full working reality of existing federations, nor is strictly required. The coordinated development of agreements about broad basic fiscal rules (e.g., relating to debt to GDP ratios) and the establishment of intergovernmental mechanisms for regular discussion and coordination of budgetary strategies, combined with the existence of stabilizers (and corresponding deficit financing capacity) within the central fiscal structure may provide the most effective framework for macroeconomic management in most federal systems.

The dominance of the relevant literature by US analysts, and the apparent difficulties of coordinating fiscal policies across the large number of autonomous US states (not to mention local governments with significant fiscal and borrowing powers, too) may explain the strength of the usual claim that macroeconomic management should be centralized. In the context of the lesser number of fiscally autonomous regions in most other federations, and in Europe under EMU, the central level is more appropriately seen as one major player in an explicit or implicit central fiscal policy council.

For the EC, in a distinctly pre-federal stage, the fact that the 'central' budget is small, effectively has no capacity for deficit financing, and lacks stabilizer-type revenue and social security functions, opens questions about whether an explicit stabilization fund, and associated stabilization policy strategy, may be required as part of fiscal harmonization arrangements. This is the subject of other papers (especially Goodhart & Smith 1992, and Majocchi & Rey 1992) and will not be considered here.

To this point, I have taken the underlying presumptions of the traditional theorem about macroeconomic management in federal systems as given. There are, however, some reasons for questioning at least some aspects of them.

For one thing, it is clear that the four propositions set out earlier stem from an essentially Keynesian view of the world, with demand management presumed to be feasible and desirable — essentially because labour markets fail to clear as a result of wage rigidities and/or barriers to mobility. Notwithstanding the attack from the new neoclassical economists, the presumption of sticky wages and/or sluggish labour markets largely still prevails, and in particular would appear to be an appropriate basis for analysing macroeconomic management within the EC context under EMU, notwithstanding suggestions of increasing labour market mobility.

It also should be said that at least two of the four propositions set out earlier (relating to whether local debt is more, or less, external than national debt, and to the degree of correlation between regional activity levels) must be considered dubious. As Gramlich (1987, 1988) has argued, the case against 'regional' stabilization strategies, accordingly, may be weakened.

In particular, Gramlich contends that different regional economic effects of internationalization, and the more common incidence of 'shocks' being transmitted through changes to relative asset prices (e.g., energy prices) increase the likelihood of regionally differentiated macroeconomic shocks. In this context he contends that even in mature federal systems, regional stabilization initiatives (including through 'rainy day' stabilization funds made possible under constraints on the *stock* of debt at sub-federal level, rather than on annual deficits) can make a more effective contribution than central government initiatives alone based on broader instruments.

Of course, what Gramlich has to say potentially falls foul of the objections made to *discretionary* fiscal policy adjustment by any level of government based on Friedman's cogent analysis of reaction and decision-making lags. There may be reason for believing that, in this regard, sub-federal governments have a comparative informational advantage over federal governments in recognizing local shocks, but equally there is a risk that they cannot adequately distinguish between regional and national causes of macroeconomic perturbances.

7. POLITICAL MODELS, DECENTRALIZATION, PUBLIC SECTOR SIZE, AND PUBLIC SECTOR PERFORMANCE

As noted at several earlier points, the question of what *political* model would produce the outcomes claimed by fiscal federalism analysts in support of their hypotheses about the appropriate division of functions in federal systems has rarely been explicitly posed. It does seem to be universally implicitly assumed that fully representative democratic decision-making systems are in place. At the same time, however, it also seems typically to be assumed (again, implicitly) that *benevolence* drives public sector decisions.

Explicit public choice models of decision-making in federal-type systems have not been fully articulated, allowing for the incentives of politicians to seek to exploit the benefits to themselves of shaping policies and federal fiscal arrangements to benefit politically powerful groups which can deliver votes or political resources more generally — although Breton and Scott's (1978) analysis goes some way towards filling some gaps.

A couple of things which do seem clear, *a priori*, are that:

(a) more limited (and usually more competitive) access to tax bases, often accompanied by greater limits on access to deficit financing, for sub-federal than for federal levels of decision-making imply a tighter budget constrained environment, *ceteris paribus*, for sub-federal levels; but

(b) the role of intergovernmental grants, and related phenomena such as revenue-sharing, may slacken the efficiency-promoting effects of budget constraints on sub-federal decision-making, and their distribution seems likely to be shaped as much by the political gains to donors as by requirements for efficiency and equity.

Within public choice theories primarily directed at single-level government analysis, some suggestions about the likely consequences of decentralization of decision-making have been offered (for a general discussion see Lindsay & Norman 1977, and Giertz 1981).

Olson, for example, suggests that only few public goods can be considered national in the sense that they benefit all citizens: most public goods are local, conferring benefits to only a subsector of the society. Major taxes, however, especially in a highly centralized fiscal structure, are levied across all taxpayers. Given this, he suggests, an excessively limited level of public goods provision is likely in a system of majority voting. This is because the benefits of particular government programs are limited to a few while the costs are widely spread over all the population. On this view, decentralization of expenditure *and taxation* would lead to greater (and more efficient) outputs of public services (Giertz 1981).

Downs also suggests that individuals often make voting decisions on the basis of incomplete information. He assumes that in most cases individuals are unable to fully appreciate or know the benefits from public programs, while they are likely to be aware of the tax liability that these entail. This asymmetry of information causes a systematic bias towards underprovision of public goods — a bias which tends to be stronger the more centralized and complex the government structure becomes. Again, the consequence is that decentralization will lead to increased, and more nearly optimally efficient, public sector outputs (Lindsay & Norman 1977, Giertz 1981).

Buchanan and Tullock also view decentralized structures as producing more efficient outputs, but in their case because they constrain a tendency under majority voting to *over-expand* output. They argued that in a voting system where decisions are made on the basis of majority voting rather than unanimity, there will be a general tendency for over-provision of public goods because the minority groups which stand to benefit from the different public programs can trade votes or enter into an alliance in order to become a majority and have their desired programs implemented. There will be a strong motivation for this type of logrolling activity — since most taxes are levied on the whole taxpaying population, the beneficiaries actually shoulder only part of the costs of these programs. Moreover, many taxes are indirect and almost all tax decisions are made independently of any particular spending decision.

As the government structure becomes highly centralized, the relevant benefits and costs of public expenditure become increasingly distorted, more complicated and indirect taxes are introduced, and more projects of local interest get financed from nationwide taxes. These factors tend to create fiscal illusions that systematically underestimate costs and over-value benefits of public expenditure to voter-beneficiaries, fuelling more logrolling activities. As each beneficiary coalition works for the passage of programs up to the point where their marginal benefits equal their marginal costs, without considering the costs borne by other taxpayers outside the coalition, an inefficiently high level of public goods and services tends to be provided. This results in an over-extended public sector, and the more so the more centralized is decision-making.

In an entirely different approach, based on considerations of constitutional design rather than on a specific analysis of political systems in action, Brennan and Buchanan (1980) argue that decentralization of decision-making is a desirable design feature for fiscal systems. As noted earlier, they model governments as revenue-maximising leviathans, not as a depiction of current reality but as a model of worst-likely outcomes when electoral constraints and other 'checks and balances' fail to be adequately constraining. A fiscal constitution in which political decision-making is decentralized, and governments forced to compete within and between levels, they suggest, will act to break the potential exercize of monopolistic power by governments that sometimes can occur despite other (e.g., electoral) checks and balances. They also warn, however, that revenue-sharing arrangements, and systems of intergovernmental grants more generally, can act as collusive/anti-competitive devices, enabling participating governments to diminish the joint political costs of revenue raising. The Brennan and Buchanan analysis has stimulated a substantial response, especially at the empirical level, based on the fact that the logic of their position would appear to imply that, other things equal, we should expect to find that public sector size varies inversely with the degree of fiscal decentralization.

Oates' (1985) initial empirical study of the Brennan and Buchanan hypothesis has spawned something of an avalanche of studies. Unfortunately, the use of differing data bases, and varying measures of public sector size and of decentralization, leave the state of play somewhat confused.

Oates himself, using two cross-sectional samples (one of forty-three countries, the other of state/local sectors in the US) found no evidence of the hypothesized negative relationship between fiscal decentralization and public sector size. A number of subsequent studies, however, have suggested more supportive results — especially when using US data, and using the number of 'general purpose' local governments as an indicator of fragmentation (see, for example, Eberts & Gronberg 1988 and Zax 1989).

Moreover, as noted earlier, Grossman (1989, 1990) has tested the dual hypothesis that while decentralization of *expenditure* decision-making should be associated with smaller public sector size, the presence of substantial intergovernmental grants (i.e., lack of commensurate decentralization of revenue raising responsibility) might be expected to produce the reverse effect, with governments colluding to avoid the effects of interjurisdictional competition. For US data he finds support for both hypotheses; for Australian data he finds support for the collusion hypothesis but not for the expenditure decentralization hypothesis.

At this stage, in the absence of a comprehensive empirical study carefully including all relevant factors likely to influence public sector size, it would have to be said that the jury is still out on the Brennan and Buchanan decentralization hypothesis. In any event, it is not entirely clear what conclusions for institutional design we would want to draw if it were found to be supported. What we seek, presumably, is not smaller government *per se*, but rather better government. In this connection, the literature offers strong *a priori* support for decentralization — for reasons which have only partially to do with constraints on aggregate spending — *and*, even then, require that appropriate correctives for cross-border spillovers and so on also be utilized.

Nonetheless, the growth of empirical studies of aspects of federalism is to be welcomed and, notwithstanding the fact that the choice of fiscal structures will reflect broader political values and purposes as much as economic and fiscal purposes, such studies could be helpful in discerning what impact fiscal structure has on economic and social policy performance in various dimensions.

Oates' empirical work (1972, 1985) has, in passing, indicated fairly systematic differences in the degree of fiscal decentralization evident in developed and developing countries. Whether or not this is significant in explaining their relative economic status is an interesting, but unanswered question. So, too, is the question, even among developed/industrialized countries, whether there is any significant systematic relationship between fiscal structure and aspects of economic performance more generally. A recent study (Barwise & Castles 1991) suggests, *inter alia*, that greater centralization of tax collection may, for example, be associated with a poorer record on inflation control among OECD countries. Their analysis, by their own admission, is preliminary and tentative, but it is highly suggestive, and indicative of a wide range of issues yet to be addressed in practical empirical terms that may better shape our understanding of the importance of institutional design, fiscal structure included.

8. MANAGERIAL ASPECTS: COOPERATIVE VERSUS COMPETITIVE FEDERALISM

A continuing feature of the writings on federalism, by fiscal economists as well as by political scientists, has been attempts to classify the dominant style and character of intergovernmental relationships (or interactions), and, indeed, to periodize the history of federal systems, by reference to the changing 'dominant character' of intergovernmental transactions over time. Coercive, competitive, cooperative, collaborative and regulatory styles of federalism, for example, have been identified everywhere at different times. Although they take on different meanings in different contexts, the labels or images are (deliberately) normative (or at least persuasive) in content. Typically, in this literature, cooperative and collaborative federalisms are presumed to be virtuous, while competitive (and, even more so, coercive) federalism does not find strong favour.

It is far beyond the intended scope of this paper to fully explain, assess and criticize this branch of literature, which encompasses political and administrative, as well as fiscal, dimensions of intergovernmental relations. One aspect of it, however, does bear some discussion — namely, the interesting juxtaposition of the facts that, on the one hand, competitive federalism is receiving more favourable assessments in the literature while, on the other, managerialist considerations are leading to pressure for reforms to secure reductions in so-called overlapping and duplication, and to more cooperative or collaborative models of intergovernmental management where shared responsibilities are inevitable or unavoidable. The issue of cooperative styles of federalism is of interest in its own right, moreover, to EC decision-making.

8.1. Competition and federalism

Despite the standard presumption among economists in favour of competition in markets, there has been a somewhat ambivalent attitude towards fiscal competition within federal systems. While acknowledging the virtues of diversity and experimentation that federal-type systems can facilitate, there has been an often repeated suspicion reflected in the literature that fiscal competition between governments at a given jurisdictional level often can be destructive or wasteful, and can lead (through tax competition) to an erosion of capacity to deliver adequate levels of services and a reduced reliance on ability-to-pay taxation. At the same time, vertical interjurisdictional competition within particular policy areas was argued to lead to excessive overlapping and lack of clarity in accountability.

As briefly noted in earlier sections, more recent assessments of tax competition, fiscal competition more generally, and political competition in its broadest sense, have been considerably more favourable. One measure of the change of view is to be found in the completely different tone of two reports on these issues by the US Advisory Commission on Intergovernmental Relations (1981, 1991) published a decade apart.

Part of the reason for the change of assessment derives from the observation that policy cooperation and tax harmonization provide bases for cartelization of public sector decision-making and lead to over-expansion of public sector activity. This is especially emphasized in Brennan and Buchanan (1980), but also is reflected in the general thrust of contributions to public choice theory and the theories of bureaucratic behaviour.

Equally importantly, theoretical and empirical studies (e.g., those discussed and/or reported in Kenyon & Kincaid 1991) suggest that the fears that competition may lead to under-supply of services and elimination of ability-to-pay taxation are exaggerated. While not all assessments are as sanguine as those of Oates and Schwab (1988, 1989) discussed earlier, it is now more widely recognized that even taxes on mobile bases need not be driven, by competition, to excessively low levels where firms and other mobile factors also take into account the quality of services offered by competing jurisdictions.

What also is agreed in the literature, however, is that offers of special tax packages or concessions to business to relocate can be at least a zero-sum, and often a negative-sum, game. Competition in terms of overall tax (and service) levels, or even levels of specific taxes, would be preferable to granting specific tax packages to specific businesses, and it is suggested that the development of protocols, or of centrally imposed disincentive systems to limit this behaviour would be advantageous.

In addition to these assessments of *fiscal* competition, as also noted at several earlier points, Breton (1987) has promoted a broader view of the advantages of both vertical and horizontal *policy* competition more generally in promoting more responsive, better quality outcomes in federal systems. Dynamic 'Schumpeterian'-style competition in policy development between governments at different levels, and small scale (and hence less 'risky') policy experimentation and the diffusion of successful results among governments at given jurisdictional levels, can result in a better match between citizen preferences and public sector outputs and at lower overall cost, even taking into account the organizational costs inherent in federal systems. Contrary to often-repeated claims, the thrust of this perspective is that competitiveness and duplication are indications of the vitality of federalism.

Although at its current stage of development the contents of this literature may not apply fully to the EC, they clearly have a bearing. The principle of subsidiarity, leaving as much autonomy as possible to member states, is supported not just as a philosophical principle, or to permit diversity, but as a basis for healthy competition and experimentation. Equally importantly, in areas where the Community level is given competences, allowing continued (concurrent) authority in the same policy spaces to member governments can be vitally important to effective, competitive policy development. The lack of a representative and responsive political structure at Community level reinforces the importance of this requirement.

Likewise, the seemingly strong push for formal tax harmonization in the Community should be viewed critically. Some of the pressure for greater harmonization over a wider range of tax bases apparently has arisen from a desire to have comparable bases for assessing (potential) capacity to contribute to community resources; and some has arisen from fears about competitive bidding for mobile tax bases. Without denying the potential for 'problems' with unharmonized bases, the dangers of restricting competition need to be given full weight. Implicit centralization of substantial parts of revenue collections can contribute to reduced policy entrepreneurship among member states, and where service provision as well as effective tax rates are taken into account, competition is not unambiguously unhealthy.

8.2. Cooperative federalism and joint tasks

Although it has taken different forms in different federations, and occurred at different times, there frequently has been a strong current emphasizing the need for cooperative styles of management of intergovernmental relations. In at least some cases, in its latest manifestation, the push appears to be a logical extension of the emphasis on new 'managerialist' styles of public sector organization and management to intergovernmental arrangements.

Even those who press for competitive federalism would accept that conventional arguments about spillovers, economies of scale, etc. indicate a need for some forms of 'coordination' between governments: in general, growing interdependence between jurisdictions, vertically and horizontally, both requires and guarantees the growth of cooperation. The managerialist thrust, however, tends to want to deny the converse case for (vertical) policy competition alongside the essential elements of coordination: in extreme forms, indeed, it wants a neat and tidy (non-competitive, non-overlapping) allocation of functions between jurisdictional levels, and strong forms of coordination or joint management where shared responsibilities are inevitable or 'unavoidable'.

As already noted, the denial of vertical competitive interaction between levels of jurisdiction is a denial of one of the strong claims to virtue of truly federal systems. What have yet to be addressed are the implications of models of 'joint management' arrangements for shared responsibilities.

A useful 'case study' is provided by Germany's Joint Tasks, adopted through amendments to the Basic Law in the late 1960s. They are a useful case for present purposes both because the German federal structure in many respects is closer than most to EC structures and because, for other federal systems, they illustrate dangers inherent in many proposals for reform of federal–state arrangements.

Scharpf (1988) offers a potent analysis of lessons both from German federalism and European integration. Among features shared by German federalism and its joint tasks and the EC are the facts that in both cases the 'central' governments rely on sub-federal jurisdictions for regional/local administration of their programs, and share decision-making and other powers over important functions with sub-federal governments. In the EC case, additionally, the 'central' level does not have independent taxing powers. To a substantial extent, cooperation is an even more inevitable feature of the operation of German and EC governance than in other federal systems.

Formal joint decision-making in some policy areas (education, infrastructure, agriculture and industrial development) in Germany was introduced by constitutional changes in 1969, reflecting perceptions of policy gaps and unduly narrow sub-federal policy perspectives as well as concerns about the constitutionality of federal grants previously used to achieve coordination. Although in joint decision-making processes qualified majority voting rules applied, after initial difficult experiences in the education area, the search for unanimously agreed outcomes dominated.

After initial successes, the joint programs eventually became seen as: (i) a source of *inefficiency*, with funding of them over-expanded relative to other programs; and/or (ii) *inflexible*, failing to be able to adjust funding allocations to changing objective assessments of needs or performance; and/or (iii) *unnecessary*, in that in some cases the 'need' for programs disappeared, but funding continues; and/or (iv) *undemocratic*, because they resulted in the presentation to parliaments of *faits accomplis* of bureaucratic intergovernmental negotiations.

The last of these problems is common to intergovernmental negotiations in general. The others, however, suggest distinctly sub-optimal outcomes. The pathology of these outcomes, Scharpf suggests, is derived from the fact that *de facto* unanimity voting rules are applied to ongoing policy decisions, rather than one-shot decisions.

Once the joint decision-making structures are unanimously agreed and initial policies established, the 'reversion rule' that applies if agreement to policy changes cannot be reached is not separate decisions, but continuation of the previously agreed common policies: these may become sub-optimal over time, but cannot be abolished or changed as long as they are preferred by a single member of the joint-decision group.

Thus, what Scharpf calls the 'joint-decision trap' — the persistence of sub-optimal outcomes — arises from inappropriate design or operation of institutional arrangements. And the problems will be even greater where joint decision-making fully 'occupies the field', so that there is no independent freedom of action available at all in the relevant policy field.

The decision trap could be avoided if certain styles of decision-making were adopted by the members — in particular if powerful consensus-formation mechanisms exist, so that a problem-solving style emerges. But the emergence of such styles cannot be relied on always and everywhere or, indeed, anywhere. Institutional design and the selection of decision-making rules needs to pay particular attention to ensuring that 'efficient' outcomes, and desirable future adjustments of policies, are encouraged almost irrespective of decision-making styles and motives.

Seen in this light, Scharpf's discussion of joint decision-making is closely related to economists' work on political choice and institutional design, for example, that flowing from Buchanan and Tullock's (1962) early analysis. While unanimity is an appropriate decision-making rule at the constitutional (rule-setting) stage itself, for ongoing policy decisions, it is an inefficient rule for policy choice. Bearing in mind both the costs of decision-making and the costs of 'coercion' of minority views under less inclusive voting rules, the cost-minimizing rule for ongoing decisions usually will be less than all-inclusive. Scharpf's analysis of German federal joint decision-making, and related literature on institutional design, has some obvious applications to the EC. Indeed, ultimately, it points to some big issues about Europe's decision-making frameworks.

The Common Agricultural Policy (CAP) offers a direct application of Scharpf's analysis, as he discusses at length. The initial unanimous agreement to its introduction is easily understandable, but the continued unanimity requirement under the Council of Ministers for changes to the policy have ensured that its reform is difficult and slow. Even if most members saw themselves as harmed by it, the 'reversion rule' that the *status quo* policy persists gives those members who benefit from it, politically, a permanent hold-out position. Side-deals might occasionally be arranged. Under current rules, however, getting out of the joint-decision trap will require the emergence of some major consensus-building force.

These same problems will apply to any policy area where the EC's unanimity rule applies to ongoing decisions about policy change. Indeed, the EC's problems in this area are even deeper and more structural than is true for other federations, Germany's included. Although intergovernmental conferences and especially the European Council meetings might be regarded as constitution-setting stages, the ongoing evolutionary nature of such constitutional decision-making in the EC *and* the fact that no significant difference exists between decision-rules applied to constitutional and policy decisions locks the Community into the dangers of the joint-decision trap, reliant on bursts of consensus-building events or energies to enable it to escape from being permanently trapped in previously determined positions.

Attention to broader issues of institutional design will be at least as important to the vitality and efficiency of the EC as the present focus on the Community budget under EMU and on the possible future evolution of the range of Community competences. There are lessons, too, for other 'federations' in relation to cooperative federal arrangements. Some (including Canada and Australia at present) are looking for ways of 'improving' intergovernmental relations, and *inter alia*, proposing the development on new joint decision-making procedures. The consequences of joint decision-making German and EC-style, and of the literature on institutional design more generally, are worth special emphasis.

9. CONCLUDING REMARKS

Because it has been shaped largely to explore issues in established, mature, federations (and/or other systems of multi-level government) with firmly established and politically 'sovereign' federal or central governments, the traditional fiscal federalism literature has some distinct limits as an aid to thinking about public finance issues in the European Community (and, for similar reasons, in other emerging federal or confederal style arrangements, such as that of the former Soviet Union). In some measure, this is because in mature federations — at least those which are reasonably stable — a substantial degree of homogeneity in preferences for core public sector services (defence, foreign policy, minimum standards of social security, health and education, for example) can be expected to have evolved. This implies, for example, that centralizing such functions at federal and/or regional levels of government involves smaller costs from 'uniformity' than seems likely in unions that are only in the process of forming. The emphasis in the existing literature tends to be on being able to line up what are technically public goods and services on a 'spectrum' from supranational to local, ignoring the fact that large differences in preferences, at least in early stages of federation, among relatively disparate constituent members can make what appear virtually universal conventional allocations of functions elsewhere less relevant presumptions in new federations.

Relatedly, with only few exceptions, the fiscal federalism literature pays little attention to questions of the *evolution* of federal-type arrangements. Here the work of Breton and Scott (1978) — outside the mainstream — may have more to offer to the future development of a theoretical understanding of evolving unions, with its emphasis on the one hand, on administration and coordination costs and, on the other, on signalling and mobility costs, as bases for considering the allocation and, over time, reallocation of roles and functions, including through political forums.

Notwithstanding contributions particularly emphasizing the possibility that decisions about the appropriate level for 'provision' of public services can be separated from decisions about their production (e.g., where economies of scale, or of coordination exist), the extant federalism literature has tended to pay little attention to the economics, and politics, of coordination. In Europe, in contrast, political considerations make coordination and harmonization more central concepts. Indeed, operationalization of the concept of subsidiarity where significant cross-border influences can be shown to exist requires that coordination costs, and organizational costs more generally, be recognized as critical decision-making variables.

A further feature of the EC case which leaves a question mark over the extent of the applicability of the existing federalism literature (in its broadest sense) concerns political structures. Within existing models of fiscal federalism, the political counterparts to theorems about the likely outcomes of different assignments of functions are rarely discussed. Where implicit assumptions of well-informed benevolent representative political arrangements are dropped in favour of explicit 'public choice' style models, with the possible exception of those few analyses driven by bureaucratic agenda-setting assumptions, either median-voter, or parliamentary/congressional or executive/presidential style 'representative' models have been employed, which at this stage in their development, bear little or no resemblance to Europe's decision-making structures.

A particularly important set of institutional considerations concerns the decision-making rules employed in the EC. The use of unanimity as the dominant decision-making rule *both* for 'constitutional' (rule-making) decisions (through, for example, meetings of the European Council), *and* as the decision-rule for ongoing decisions about policy choices and reforms, not only slows down the evolution of the Community, but also can lead to the persistence of sub-optimal policy choices — the CAP being only the most egregious example.

The distinction between constitutional decision-making and ongoing policy decisions is an important one, and the relevant literature clearly establishes that the selection of decision-making rules for different types of decisions can greatly affect the efficiency of policy choices. Existing federations may not always have made such institutional design decisions as well as they might, but EC institutional arrangements seem almost to be *designed* to ensure inefficient ongoing Community policy choices, as well as to ensure a (perhaps more deliberately intended) very slow evolution of the Community as a whole towards a more complete and mature federal-type union.

Finally, in relation to one of the most extensive areas of development in the fiscal federalism literature in recent years — that involving questions about the effects of *mobility* on fiscal arrangements — it is unclear how directly applicable the analysis is, at this time, to Europe. Labour market and residential mobility may be more limited *de facto*, if not *de jure*, between Europe's communities than within most established federations, and widely varying judgements appear to be held about how this will change as EMU and social aspects of union proceed. There are, nonetheless, important indications in the literature that may be valuable to the EC in thinking about issues relating to redistributional policies (interjurisdictional and interpersonal) that may arise in the future, even if they have limited application currently.

Despite the caveats, fiscal federal theory, as well as the experience of federal systems in operation, offers insights relevant to constructing what obviously need to be 'new' models of federal-style unions. Only broad hints about the nature of the required models have been provided here — but a basis clearly exists for the development of models more immediately and directly useful to the European case.

ATTACHMENT

OPENNESS OF LOCAL ECONOMIES AND FREE MOBILITY

The openness of local economies in federations where free migration between regions is possible raises a range of economic issues.

Much of the literature dealing with this aspect of local public economics began with the seminal work of Tiebout (1956). He attempted to show that in a federation with a large number of regions, each choosing a mix of local public goods and taxes, and with free mobility, the level of provision of local public goods in each region would be optimal and residents would be located between regions efficiently (an optimal population distribution). However, Tiebout's work was not rigorous and he made a number of disputable assumptions. In particular, it was supposed that: (i) residents had full information about all alternatives; (ii) the number of regions was high enough so that residents had a spectrum of regions from which to choose; and (iii) residents' incomes were independent of locational choice.

Tiebout's conjecture was clearly stimulated by a claim by Samuelson (1954) that people have no incentive to reveal their true preferences for public goods and indeed faced an incentive to conceal them if the taxes they paid depended upon those preferences. Tiebout's hypothesis offered a mechanism for truthful revelation of preferences, at least for local public goods, because mobility between regions meant that residents can 'shop around' for the region offering the tax and public good mix closest to their true preferences. By 'voting with their feet' people may reveal their preferences by migrating to these regions. Eventually, residents living in a particular region might be expected to have similar preferences so that people sort themselves by 'type' into various regions. In this way, Tiebout claimed that the problem of preference revelation would be solved for local public goods and optimal levels of provision achieved.

An extensive literature has subsequently emerged on Tiebout's conjecture. The literature can be usefully categorized under the following headings: (i) analyzing the implications of household mobility for *locational efficiency*; (ii) studies testing for a Tiebout mechanism; (iii) positive theories of local public good expenditure determination in the presence of household mobility; and (iv) the general implications of mobility for local public good provision. A brief review of each category is presented below.

1. Locational Efficiency and Mobility

There are three issues which are usually discussed under the heading of locational efficiency. The first seeks to define a region's optimal population, the second looks at the optimal distribution of a given national population between regions and the last examines the efficiency consequences of free migration across localities. Each is reviewed below.

1.1. Optimal population

The following discussion examines the question of what is a region's optimal population taking into account the amount of resources within the region and the productivity of labour. This issue has been studied by, among others, Flatters, Henderson and Mieszkowski (1974), Stiglitz (1977, 1980) and Hartwick (1980). Characterizing optimal local populations analytically is made more difficult when there are heterogeneous individuals. Hence, the literature assumes that all households in a jurisdiction are identical, in terms of incomes and preferences, and that all migrants are treated in the same way by local governments as existing residents. Other assumptions made in these models include: (i) fixity of a factor, usually land, which generates regional rents; (ii) invoking the community preference model of local decision-making (discussed later) and assuming that regional governments adopt the Samuelson condition; (iii) cost functions for public goods incorporate a population term to capture congestion and a public goods output term to capture economies of scale; (iv) regional governments can control the number of residents in a locality; (v) no existing or new resident retains ownership of resources outside the region; and (vi) households leaving the region surrender ownership of local resources.

The key result is that a representative region i can maximize its per capita welfare by adding residents to its population until the marginal product is equal to per capita consumption of the private good, or:

$$MP_i = x_i \tag{1}$$

where MP_i is the marginal product of the marginal person in region i and x_i is per capita consumption of private good in region i.[1] A migrant to region i consumes x_i but increases private good consumption by MP_i. Thus entry will increase per capita utility until $MP_i = x_i$.

One can also show that when (1) is satisfied, rents earned on the fixed factor are equal to local public good expenditure (see Stiglitz 1977, 1980, Wildasin 1986, Hartwick 1980) for further discussion), that is:

$$p_i q_i = f(n_i) - MP_i n_i \tag{2}$$

where $f(n_i)$ describes aggregate regional output as an increasing concave function of n and MP_i is the marginal product of labour in region i. This has been termed a Henry George Theorem.

The assumptions upon which these models of optimal population are based are open to question. One criticism is that in practice, governments cannot independently vary the size of local populations to achieve an optimum since, as will be discussed below, in reality people migrate freely between regions in federal economies. With free migration, regions will in general not achieve their optimum populations. The notion of optimal population and a free migration equilibrium are generally incompatible.

Nevertheless, the notion of an optimal population is of some interest as benchmark against which to compare free migration outcomes.

---

[1] A detailed discussion of this result can be found in Wildasin (1986), p. 25–26.

1.2. Population distribution between regions

The discussion above revolved around determining a region's optimal population when considered in isolation from other regions in a federation.

However, Buchanan and Wagner (1970), Buchanan and Goetz (1972), Flatters, Henderson and Mieszkowski (1974) and Wildasin (1980) have examined the issue of how a given national population should be allocated efficiently across jurisdictions. The models used usually pose a planner's problem analogous to the one adopted in the optimal population models.

The key results from this work are as follows. Suppose that the national economy consists of $i = 1, 2$ regions. For the federation's population to be distributed between the two regions optimally requires that the net marginal social benefit, or NMB_1, from adding an extra person to region 1, where $NMB_1 = MP_1 - x_1$ from the optimal population condition, equal the net marginal social benefit, or NMB_2, from adding a person to region 2, where $NMB_2 = MP_2 - x_2$ from region 2's optimal population condition.

In other words, a federation's population is distributed optimally when the following holds:

$$NMB_1 = MP_1 - x_1 = NMB_2 = MP_2 - x_2 \qquad (3)$$

1.3. Free migration equilibrium

It is argued that (3) will not be replicated at a free migration equilibrium, because of the presence of two externalities associated with the free migration process.

The first is a 'fiscal externality' which works as follows. When a resident migrates to, say, region 1 from region 2, they contribute to public goods in region 1 and confer a benefit on all residents in region 1. On the other hand, the migrant ceases contributing to public goods in region 2 and hence a cost is imposed on region 2. It is argued that these costs and benefits are not taken into account by migrants in their personal cost-benefit calculus. A clear statement of this argument can be found in Buchanan and Goetz (1972), p. 30.

The other potential source of distortion at a free migration equilibrium is a rent externality. The idea here is that the presence of regional rents accruing from a fixed factor may induce inefficient migration. If labour receives a share of rents on the basis of residency alone, they respond to their average, rather than marginal product. At a free migration equilibrium, it is then possible that marginal products between regions would not be equated.

However, if fiscal and rent externalities are absent then free migration equilibria will yield an optimal population distribution. Wildasin (1986), p. 14-17 provides a discussion of cases where free migration equilibria may be efficient. In addition to the points made by Wildasin, one should also note the following. The importance of fiscal externalities as a source of distortion depends upon the 'publicness' of the public expenditure of local jurisdictions. To the extent that regional expenditure is on publicly provided private goods, this distortion diminishes and, in the extreme, disappears. Thus, how important fiscal externalities are in practice is an open question. The significance of rents as a source of distortion depends upon the rents accruing publicly and being disbursed to residents on the basis of residency alone. However, if all rents went to persons solely on the basis of ownership of the rent-creating fixed factor, the distortion would disappear because ownership and residency would be determined independently.

Thus, for fiscal and rent externalities to be empirically important sources of distortion of free migration equilibria, one requires that regional expenditure have a significant publicness component and that there be significant rents collected regionally and disbursed to residents on the basis of residency alone.

1.4. Fiscal equalisation transfers

A study by Boadway and Flatters (1982a) emphasizes the importance of public goods and rents which are collected publicly and disbursed on the basis of residency to show that free migration equilibria will be inefficient. They also show that:

> This inefficiency can be eliminated by a particular system of interregional transfers of private goods either voluntarily arranged by the provinces or imposed by the central government.[2]

Boadway and Flatters (1982) called this an 'equalization transfer'. The implication is that such transfers need to be made by a central authority. Others to demonstrate similar results include Hartwick (1980). The essential idea behind these transfers is that they reallocate people between regions until (3) is satisfied. The transfer is a function of the fiscal and rent externalities. Fiscal and rent externalities, and the inefficient free migration equilibria they induce, are the only justifications for fiscal equalising grants on efficiency grounds to be found in the local public economics literature.

2. Tests of Tiebout's conjecture

A considerable amount of work has been devoted to testing Tiebout's conjecture. For example, it is often argued that property taxes, which may be used to finance local public goods are 'capitalized' into the value of property. If such capitalization does exist, it is evidence that Tiebout's conjecture may be correct. In other words, capitalization implies that people are not ignorant of local policy since they are taking it into account in their market transactions. This is essential if their choices on where to locate are to somehow ensure that local policies are efficient. Accordingly, evidence of capitalization is support for Tiebout's hypothesis and it is for this reason that so much effort has been put into determining to what extent and under what conditions capitalization may occur.

Oates (1972) found evidence of capitalization. Since then there have been other studies, including Cowring (1974), Gustely (1976), King (1973, 1977), Oates (1973), Sonstelie and Portney (1980), Hamilton (1976) and Starrett (1980) which have discovered capitalization in varying degrees. Underlying these studies are two notions of capitalisation. The first, called

---

[2] Boadway & Flatters (1982), p. 622.

'comparative static capitalization' by Wildasin (1985, p. 66) is the change in equilibrium property values in a locality resulting from a change in fiscal policy. The second, called 'cross-sectional capitalization' by Wildasin relates to the variation in property prices across jurisdictions observed in a particular equilibrium.

The general results of these studies are as follows. First, comparative static capitalization only occurs when regions are utility-takers. If this assumption is relaxed, Starrett (1980) has shown, strong restrictions on preferences are required to retain capitalisation. Second, for cross-sectional capitalization to occur, continual spatial variation in policy variables is needed for given regional attributes. Finally, a feature of models used in capitalization studies is that policy changes in a region do not affect residents' welfare because a change in policy in one region can be offset by a resident moving to another region. In this way, no person suffers a utility loss.

Thus, despite some limitations, models showing positive capitalization are of interest in the sense that they show under what conditions capitalization might occur. These conditions appear to be quite stringent, but there may be some circumstances where they could be met.

3. POSITIVE THEORIES OF LOCAL PUBLIC GOOD PROVISION WITH FREE MIGRATION

Openness of localities and free mobility also places an extra dimension on theories of how local governments determine their expenditure on local public goods. In the following discussion, the more important positive theories of government behaviour adopted in the public economics literature are briefly reviewed. Following this, behavioural models which have been applied at the local level (in particular to take into account government behaviour, mobility and expenditure determination) are examined and discussed. These models contain aspects of the standard public economics behavioural models in them, as well as aspects particular to the local level.

3.1. Community preference model

The simplest model to be found is based on the view that a community acts like a single household or group of identical households. This model is a natural starting point for many theoretical and empirical studies of local public economic issues because of its relative simplicity.

It is usually assumed that a region acts as an individual with an exogenously determined level of income, or aggregate regional income. This income can be allocated between private and public good consumption. A jurisdiction chooses its level of local public good provision so as to maximize the welfare of its representative resident subject to a regional budget constraint. Hence, the community preference model is really the two-person model of standard consumer theory, except that there are two regional governments rather than consumers, and the budget constraint is obtained by aggregating over a homogeneous regional population.

The community preference model continues to be used widely in theoretical work but not so much in empirical work. For example, as will be seen later, it is used in the theoretical analysis of intergovernmental transfers including the neutrality literature, tax exporting, tax competition and optimal local taxation. Although the model abstracts from any collective choice aspects of local government behaviour, effectively by assuming them away, it is often a necessary simplification in theoretical work in order to allow one to simplify some problems to a level which permits analysis. This explains its continued widespread use in theoretical work on local public economics.

3.2. Median voter models

Probably the simplest alternative to the community preference model is the median voter model discussed in Mueller (1989). The basic idea is as follows. Suppose that a public issue, for example, determining the level of provision of a local public good, is to be decided in an electorate of a fixed size by a number of pair-wise votes over a set of alternatives. Assume further that there is a simple majority voting rule. The pair-wise voting procedure is to continue until a policy (level of expenditure in this discussion) is found which cannot be defeated by any pair-wise contest against any other alternative. Call this a majority voting equilibrium. If issues are defined along a single dimensional vector and each voter's preferences are single-peaked in that one dimension, then this majority voting equilibrium will be the preferred outcome of the median voter. Given a diversity of preferences over local public goods, the median voter model predicts that the median's preferences will be implemented.

If single-peakedness is not met, it is possible that 'cycling' may occur whereby it is possible to keep redefining an issue so as to benefit some people and harm others. New winning coalitions, containing some members of previously losing coalitions, and excluding members of the previously winning coalition, are always feasible.

The median voter model has been applied widely in empirical work on local public economics. For a review see Wildasin ((1985) p. 42-52). However, median voter models have a number of limitations. First, they often assume that all households within a given class have identical preferences and only differ in their incomes and tax prices. Second, it is usually assumed that preferences take some specific form which imposes additional restrictions on outcomes. Third, there are the 'multiple' and 'fractile' fallacy problems noted by Romer and Rosenthal (1979). The multiple fractile fallacy is simply that the level of public good output actually chosen by a region may not be the level preferred by the median voter. Instead, the actual level may only be related to the median's preferences. The fractile fallacy refers to the problem that if local expenditures are decided by a decisive voter, as the median voter theorem suggests, how does one know that this voter is actually the one with median preferences?

Wildasin (p. 53) notes that the multiple and fractile fallacy problems may be irrelevant in some cases. This would be so if the objective is to build a behavioural model with good predictive power and at the same time be certain that levels of provision are always some given multiple of the median's preferred outcome. He also claims that a more compelling defence of the median voter model would be to show that it is in fact superior to proposed alternatives.

3.3. Bureaucratic models

Median voter models of local government behaviour emphasize preferences of voters and implicitly assume that by some mechanism, alternatives to be voted on are brought before voters. Some authors, for example Romer and Rosenthal (1979), have developed a theory to show the role of bureaucrats in influencing the set of alternatives to be voted on and hence the level of local public good provision.

In their simplest versions, these models assume that local bureaucrats propose budgets to voters which are approved or not approved in a referendum. If the bureaucrat's proposal is defeated, then the budget is set at an alternative level, called a 'reversion' level, determined by some procedural rule, for example, the previous year's budget plans with a percentage increase. Based on Niskanen (1971), bureaucrats are assumed to maximize the attainable budget. Epple and Zelenitz (1981) model local governments as maximizers of profits which flow to bureaucrats to be spent on 'perks'.

3.4. Profit-maximizing localities

Another behavioural model posits profit-maximizing localities. In this model, policies are chosen to maximize land or property values because decision makers' welfare is assumed to be linked directly to property values (see Margalis (1968) and Negishi (1972)). The key question is, will such behaviour result in efficient levels of provision? The general result, for example see Wildasin (1983) and Henderson (1985), is that if utility-taking is assumed, profit-maximizing localities achieve expenditure and locational efficiency, at the same time solving the Samuelson problem of problem of preference revelation.

Henderson (1985) examines the profit-maximizing locality problem in a two period setting and shows that developers may find it profitable to renege in period 2 on commitments made in period 1, thus destroying the efficiency result. However, fiscal zoning or other institutional arrangements may emerge to stop such cheating.

3.5. Voting models with property markets

Another literature has emerged where agents who determine local policies have their well-being linked to property values in the presence of free mobility. In this literature, decision-makers are assumed to be entrepreneurs who own land and develop new towns to attract migrants or landlords or owner-occupier voters. The Tiebout proposition is usually vindicated in the models used in this literature since equilibria in which Samuelson's preference revelation problem is solved are characterized.

A further literature has linked property values with voting models of local expenditure determination. This turns out to be an interesting addition to the voting model, because now expenditure policy affects property values, which in turn influence voting decisions. Indeed, changes in property values may offset any marginal benefits from policy changes. A number of authors have looked at this question, including Epple, Filimon and Romer (1983, 1984) and Stiglitz (1983). The general result from their work is that an equilibrium with voting linked to property values yields public expenditure efficiency.

These models have much in common with the profit maximizing models discussed above in the sense that voters can be seen as profit maximizing enterprises. What differentiates them, however, is that they allow mobile households to own land, thus relaxing the utility-taking assumption and allowing a higher level of generality. On the other hand, the voting models usually have stronger assumptions in other respects.

3.6. Other models

There are other models which address the question of household mobility and expenditure formulation using different concepts of equilibrium from those above. One example is due to Foley (1967) who develops the idea of a 'public competitive equilibrium'. He argues that, whatever social choice mechanism one proposes, it is reasonable to expect it not to produce outcomes which are unanimously preferred to alternatives. Any equilibrium must dominate this set of alternatives, and Foley makes this set large. He then goes on to show that public competitive equilibria are Pareto-efficient, that is, dominate the set of alternatives, and that Pareto-efficient allocations are public competitive equilibria. Others have extended this result to local public goods, including Greenberg (1983), who adds a free population mobility constraint to the equilibrium condition. Such extensions generally show that public competitive equilibria are optimal only in as much as private and public goods are allocated efficiently and that this is conditional on there being optimal populations in each jurisdiction. Also, the problem of preference revelation, an important ingredient in the Tiebout idea, is not addressed in this literature. There are other studies which adopt alternative concepts of equilibria in the context of household mobility. For a survey of these see Wildasin, p. 96–8.

Summing up this discussion of positive theories of local public good determination in the presence of Tiebout mobility, it can be seen that land-value or profit maximization leads to efficient levels of provision. Migration does not distort local decisions and locational efficiency is also achieved in these models, depending on the assumptions made about congestibility of local public goods and how they are financed.

4. LOCAL PUBLIC GOOD PROVISION AND FREE MIGRATION: GENERAL CASES

The positive models of local public expenditure determination reviewed above show efficiency in the presence of Tiebout mobility under fairly restrictive assumptions. However, Starrett (1980a, 1980b, 1982) and Boadway (1982) look at the implications of mobility for local public good provision under more general assumptions. Starrett's central result is that a locality will choose an efficient level of provision if congestion effects of migration are internalized. If this does not occur, then regions have an incentive to distort their decisions to attract or repel migrants. Thus, in Starrett's model it is possible for mobility to distort local public good provision decisions.

However, Starrett adopts the utility-taking assumption (that is, regions assume that they are small and per capita utility is not influenced by their decisions). Alternatively, Boadway develops a model of non utility-taking regions which are open but large. He assumes that each jurisdiction maximizes per capita utility subject to an equal per capita utility constraint. Boadway also assumes that regions perceive the effect of their decisions on the equilibrium level of utility in the economy as a whole. These assumptions imply that each region is maximizing the common level of utility in the economy generally. He shows that this results in their choosing policies in an efficient manner. According to Boadway therefore, regions have no incentive to do anything but provide efficient levels of local public goods.

The behavioural assumptions underlying these models are simple: that is, a community preference model is used. It remains to develop general models of mobility with richer political models of expenditure determination. In such models, there is no reason to believe that the Starrett and Boadway results will hold. Nevertheless, in the meantime, whether or not one subscribes to the Starrett or Boadway view depends on the assumptions one finds most palatable: utility-taking small regions (Starrett) or non utility-taking large open regions (Boadway).

BIBLIOGRAPHY

Atkinson, A.B. & Stiglitz, J.E. 1980. *Lectures on Public Economics*, McGraw Hill.

Barro, R.J. 1974, 'Are Government Bonds Net Wealth', *Journal of Political Economy*, 82.

Barwise, K. & Castles, F.G. 1991. 'The "New Federalism", Fiscal Centralisation and Public Policy Outcomes', Discussion Paper No. 27, Public Policy Program, ANU, Canberra (September).

Beck, J. H. 1983. 'Tax Competition, Uniform Assesment, and the Benefit Principle', *Journal of Urban Economics*, 13.

Becker, G.S. 1974. 'A Theory of Social Interactions', *Journal of Political Economy*, 82.

Bell, C.R. 1989. 'Between Anarchy and Leviathan: A Note on the Design of Federal States', *Journal of Public Economics*, 39(2).

Bergstrom, T., Blume, L. & Varian, H. 1986. 'On Privatisation of Public Goods', *Journal of Public Economics*, 29.

Bernheim, B.D. 1986. 'On the Voluntary and Involuntary Provision of Public Goods', *American Economic Review* (September).

Bernheim, B.D. & Bagwell, K. 1988. 'Is Everything Neutral?', *Journal of Political Economy*, 96(2).

Bewley, T.F. 1981. 'A Critique of Tiebout's Theory of Local Public Expenditures', *Econometrica*, 49.

Bhagwati, N. & Wilson, J.D. 1989. *Income Taxation and Institutional Mobility*, MIT Press, Cambridge.

Boadway, B., Pestieau , P. & Wildasin, D. 1989a. 'Tax Transfers and the Voluntary Provision of Public Goods', *Journal of Public Economics*, 39.

Boadway, B., Pestieau , P. & Wildasin, D. 1989b. 'Non-Cooperative Behaviour and Efficient Provision of Public Goods', *Public Finance/Finances Publiques*.

Boadway, R. & Flatters, F. 1982a. 'Efficiency and Equalisation Payments in a Federal System of Government: A Synthesis and Extension of Recent Results', *Canadian Journal of Economics*, 15.

Boadway, R. & Flatters, F. 1982b. 'Equalisation in a Federal State', Economic Council of Canada, Ottawa.

Boadway, R. 1982. 'On the Method of Taxation and the Provision of Local Public Goods: Comment', *American Economic Review*, 72.

Boskin, M.J. 1973. 'Local Government Tax and Product Competition and the Optimal Provision of Public Goods', *Journal of Public Economy*, 81.

Bradford, D.F. & Oates, W.E. 1971a. 'The Analysis of Revenue Sharing in a New Approach to Collective Fiscal Decisions', *Quarterly Journal of Economics*, 85.

Bradford, D.F. & Oates, W.E. 1971b. 'Towards a Predicative Theory of Intergovernmental Grants', *American Economic Review*, 61.

Brainard, W.C. & Dolbear, F.T., Jr. 1967. 'The Possibility of Oversupply of Local "Public" Goods: A Critical Note', *Journal of Political Economy*, 75.

Break, G.F. 1967, *Intergovernmental Fiscal Relations in the United States*, Brooking Institute, Washington DC.

Brennan, G. & Buchanan, J.M. 1980. *The Power to Tax: Analytic Foundations of a Fiscal Constitution*, Cambridge University Press, Cambridge.

Brennan, G. & Pincus, J. 1991. 'An Implicit Contract Theory of Intergovernmental Grants', *Publius*, 20.

Breton, A. & Scott, A.D. 1978. *The Economic Constitution of Federal States*, University of Toronto Press, Toronto.

Breton, A. 1987. 'Towards A Theory of Competitive Federalism', *European Journal of Political Economy*, Special Issue, 3(1&2).

Brown, C.C. & Oates, W.E. 1987. 'Assistance to the Poor in the Federal System', *Journal of Public Economics*, 32.

Buchanan, J.M. 1950. 'Federalism and Fiscal Equity', *American Economic Review*, 40.

Buchanan, J.M. 1952. 'Federal Grants and Resource Allocation', *Journal of Political Economy*, 60.

Buchanan, J.M. 1990. 'Europe's Constitutional Opportunity', in James M. Buchanan et al., *Europe's Constitutional Future*, IEA Readings 33, Institute of Economic Affairs, London.

Buchanan, J.M. & Goetz, C.J. 1972. 'Efficiency Limits of Fiscal Mobility: An Assessment of the Tiebout Model', *Journal of Public Economics*, 1.

Buchanan, J.M. & Tullock, G. 1962. *The Calculus of Consent*, University of Michigan Press, Ann Arbor.

Buchanan, J.M. & Wagner, R.E. 1970. 'An Efficiency Basis for Federal Fiscal Equalisations', in J. Margolis (ed.), *The Analysis of Public Output*, Columbia University Press, New York.

Bucovetsky, S. 1986. 'Nash Equilibrium with Tax Competition' (8610). University of Western Ontario Research Report.

Burns, M.F. & Walsh, C. 1987. 'Market Provision of Price Excludable Public Goods: A General Analysis', *Journal of Political Economy*, 89.

Cassing, J.M. & Hillman, A.L. 1982. 'State–Federal Resource Tax Rivalry: The Queensland Railways and the Federal Export Tax', *Economic Record*, 58(162).

Chernick, H.A. 1979. 'An Economic Model of the Distribution of Project Grants', in P.M. Mieszkowski & W.H. Oakland (ed.), *Fiscal Federalism and Grants-in-Aid*, The Urban Institute, Washington DC, pp. 81–103.

Cornes, R. & Sandler, T. 1985. 'Externalities, Expectations and Pigovian Taxes', *Journal of Environmental Economics and Management*, 12.

Cornes, R. & Sandler, T. 1986. *The Theory of Externalities, Public Goods and Club Goods*, Cambridge University Press, Cambridge.

Courchene, T.J. 1984. *Equalisation Payments: Past, Present and Future, Canada*: Ontario Economic Council.

Courchene, T.J. 1992. 'Reflections on Canadian Federalism: Are There Implications For European Economic and Monetary Union?' forthcoming in *The Economics of Community Public Finance*, special issue of *European Economy* (June).

Courant, P.N., Gramlich, E.M. & Rubinfeld, D.L. 1979a. 'Public Employee Market Power and the Level of Government Spending', *American Economic Review*, 69.

Courant, P.N., Gramlich, E.M. & Rubinfeld, D.L. 1979b. 'The Stimulative Effects of Intergovernmental Grants: Or Why Money Sticks Where it Hits', in P.M. Mieszkowski & W.H. Oakland (ed.), *Fiscal Federalism and Grants-in-Aid*, The Urban Institute, Washington DC, pp. 5–21.

Cowring, T.G. 1974. 'Real Property Taxes, Local Public Services and Residential Properity Values: Comment', *Southern Economic Journal*, 41.

Cumberland, J.H. 1979. 'Interregional Pollution Spillovers and Consistency of Environmental Policy', in H. Siebert, et al. (eds), *Regional Environmental Policy: The Economic Issues*, New York University Press, New York.

Cumberland, J.H. 1981. 'Efficiency and Equity in Interregional Environmental Management', *Review of Regional Studies*, 2.

De Crombrugghe & Tulkens, H. 1990. 'On Pareto Improving Commodity Tax Changes Under Fiscal Competition', *Journal of Public Economics*, 41.

Eberts, R.W. & Gronberg, T.J. 1988. 'Can Competition Among Local Governments Constrain Government Spending?', *Economic Review* (Federal Reserve Bank of Cleveland), 24.

Eichengreen, B. 1990. 'Currency Union', *Economic Policy*, April.

Epple, D., Filimon, R. & Romer, T. 1983. 'Housing, Voting and Moving: Equilibrium in A Model of Local Public Goods with Multiple Jurisdictions', *Journal of Urban Economics*, 3.

Epple, D., Filimon, R. & Romer, T. 1984. 'Equilibrium Among Local Jurisdictions: Towards an Integrated Treatment of Voting and Residential Choice', *Journal of Public Economics*, 89.

Epple, D., Zelenitz, A. & Visscher, M. 1978. 'A Search for Testable Implications of the Tiebout Hypothesis', *Journal of Political Economy*, 86.

Epple, E. & Zelenitz, A. 1981. 'The Implications of Competion Among Jurisdictions: Does Tiebout Need Politics', *Journal of Political Economy*, 89.

Epple, E. & Zelenitz, A. 1981. 'The Roles of Jurisdictional Competition and of Collective Choice Institutions in the Market for Local Public Goods', *American Economic Review*, May.

Filimon, R., Romer, T. & Rosenthal, H. 1982. 'Asymmetric Information and Agenda Control: The Bases of Monopoly Power in Public Spending', *Journal of Public Economics*, 17.

Flatters, F., Henderson, V. & Mieszkowski, P. 1974. 'Public Goods, Efficiency and Regional Fiscal Equalization', *Journal of Public Economics*, 3.

Fletcher, C. & Walsh, C. 1991. 'Intergovernmental Relations in Australia: Managerialist Reform and the Power of Federalism', Discussion Paper No. 4, Federalism Research Centre, ANU, Canberra.

Foley, D. 1967. 'Resource Allocation and the Public Sector', *Yale Essays*, 7.

Forbes, K.F. & Zampelli, E.M. 1989. 'Is Leviathan a Mythical Beast', *American Economic Review*, 3.

Gerking, S.D. & Mutti, J.H. 1981. 'Possibilities for the Explanation of Production Taxes: A General Equilibrium Analysis', *Journal of Public Economics*, 16.

Goodhart, C. & Smith, S. 1992. 'Stabilisation', forthcoming in *The Economics of Community Public Finance*, special issue of *European Economy* (June).

Goodspeed, T. 1987. ' A Re-Examination of the Use of Ability to Pay Taxes by Local Governments', *Journal of Public Economics*, 38.

Gramlich, E.M. 1977. 'Intergovernmental Grants: A Review of the Empirical Literature', in W. Oates (ed.), *The Political Economy of Fiscal Federalism*, Heath-Lexington, Lexington, Mass.

Gramlich, E.M. 1982. 'An Econometric Examination of the New Federalism', *Brooking Papers on Economic Activity*, 2.

Gramlich, E.M. 1985. 'Reforming U.S. Federal Fiscal Arrangements', in J. Quigley & D. Rubinfeld, *American Domestic Priorities: An Economic Appraisal*, University of California Press, Berkeley.

Gramlich, E.M. 1987. 'Federalism and Federal Deficit Reduction', *National Tax Journal*, 40.

Greenberg, J. 1983. 'Local Public Goods With Mobilitiy: Existence and Optimality of General Equilibrium', *Journal of Economic Theory*, 30.

Grossman, P.J. 1989. 'Fiscal Decentralisation and Government Size: An Extension', *Public Choice*, Vol. 62.

Grossman, P.J. 1990. 'Fiscal Decentralisation and Public Sector Size in Australia' (mimeo), University of Western Australia.

Gustely, R.D. 1976. 'Local Taxes, Expenditures and Urban Housing: A Reassessment of the Evidence', *Southern Economic Journal*, 42.

Hamilton, B.W. 1976. 'The Effects of Property Taxes and Local Public Spending on Property Values: A Theoretical Comment', *Journal of Political Economy*, 66.

Hamilton, B.W. 1983. 'The Flypaper Effect and Other Anomalies', *Journal of Public Economics*, 22.

Hartwick, J.M. 1980. 'The Henry George Rule, Optimal Population and Interregional Equality', *Canadian Journal of Economics*, 13.

Henderson, J.V. 1985. 'The Tiebout Model: Bring Back the Entrepreneurs', *Journal of Political Economy*, 93.

Hochman, O. 1981. 'Land Rents, Optimal Taxation and Local Fiscal Independence in Economy with Local Public Goods', *Journal of Public Economics*, 15.

Holcombe, R. & A. Zardkooli 1981. 'The Determinants of Federal Grants', *Southern Economic Journal*, 48.

Inman, R.P. 1988. ' Federal Assistance and Local Services in the United States: the Evolution of a New Fiscal Order', in H. Rosen (ed.), *Fiscal Federalism: Quantitative Studies*, University of Chicago, Chicago.

Kenyon, D.A. & Kincaid, J. 1991, *Competition Among States and Local Governments*, The Urban Institute Press, Washington DC.

King, A.T. 1973, Property Taxes, Amenities and Residental Land Values, Ballinger, Cambridge, US.

King, A.T. 1977. 'Estimating Property Tax Capitalisation: A Critical Comment', *Journal of Political Economy*, 85.

King, D. 1984, *Fiscal Tiers: the Economics of Multi-level Government*, George Allen & Unwin, London.

Kolstad, C.D. & Wolak, F.A. Jr. 1983. 'Competition in Interregional Taxation: The Case of Western Coal', *Journal of Political Economy*, 91.

Laffont, J.J. 1988. *The Fundamentals of Public Economies*, MIT, London.

MacDougall Report 1977. *Report of the Study Group on the Role of Public Finance in European Integration*, Commission of the European Communities, Brussels.

McGuire, M. 1974. 'Group Segregation and Optimal Jurisdictions', *Journal of Political Economy*, 82.

McGuire, M. 1975. 'An Econometric Model of Federal Grants and Local Fiscal Response', in W.E. Oates (ed.), *Financing New Federalism*, John Hopkins University Press, Baltimore.

McGuire, M. 1978. 'A Method for Estimating the Effects of a Subsidy on the Receiver's Resource Constraint', *Journal of Public Economics*, 10.

McGuire, M. 1979. 'The Analysis of Federal Grants into Price and Income Components', in P.M. Mieszkowski & W.H. Oakland (ed.), *Fiscal Federalism and Grants-in-Aid*, The Urban Institute, Washington DC.

McLure Jr, C.E. 1964. 'Commodity Tax Incidence in Open Economies', *National Tax Journal*, 17.

McLure Jr, C.E. 1967. 'The Interstate Exporting of State and Local Taxes: Estimates for 1962', *National Tax Journal*, 20.

McLure Jr, C.E. 1969. 'The Interregional Incidence of General Regional Taxes', *Public Finance/Finances Publiques*, 24.

McLure Jr, C.E. 1970. 'Taxation, Substitution and Industrial Location', *Journal of Political Economy*, 78.

McLure Jr, C.E. 1971. 'The Theory of Tax Incidence with Imperfect Factor Mobility', *Finanzarchiv*, 30.

McLure Jr, C.E. 1986. 'Tax Competition: Is What's Good for the Private Goose also Good for the Public Gander?', *National Tax Journal*, 39.

Majocchi, A. & Rey, M. 1992. 'A Special Support Mechanism in EMU: Need and Nature' forthcoming in *The Economics of Community Public Finance*, special issue of *European Economy* (June).

Margolis, J. 1968. 'The Demand For Urban Public Services', in H.S. Perloff & L. Wingo (ed.), *Issues in Urban Economics*, The John Hopkins University Press, Baltimore (pp. 527–65).

Mieszkowski, P. & Toder, E. 1983. 'Taxation of Energy Resources', in C. McLure Jr. & P. Mieszkowski, (eds) *Fiscal Federalism and the Taxation of Natural Resources*, Heath-Lexington. Lexington, Mass.

Mieszkowski, P. & Zodrow, G.R. 1984. 'The Incidenceof the Local Property Tax: A Re-Evaluation', NBER Working Paper 1485.

Mintz, J. & Tulkens, H. 1987. 'Commodity Tax Competition Between Member States of a Federation', CORE Discussion Paper No. 8427.

Mueller, D.C. 1989. *Public Choice II*, Cambridge University Press, Cambridge.

Musgrave, R.A. 1959. *The Theory of Public Finance*, McGraw-Hill, New York.

Musgrave, R.A. 1961 'Approaches to a Fiscal Theory of Political Federalism', in *National Bureau of Economic Research, Public Finances: Needs, Sources and Utilization*, Princeton University Press, Princeton, NJ.

Musgrave, R.A. 1971. 'Economics of Fiscal Federalism', *Nebraska Journal of Economics and Business*, 10.

Musgrave, R.A. 1981. 'The Leviathan Cometh — or Does He?' in H. Ladd & T.N. Tideman (eds), *Tax and Expenditure Limitations*, The Urban Institute, Washington DC.

Musgrave, R.A. 1983. 'Who Should Tax, Where and What?', in C. McLure Jr. (ed.), *Tax Assignment in Federal Countries*, ANU Press, Canberra.

Negishi, T. 1972. 'Public Expendure Determined by Voting with One's Feet and Fiscal Profitability', *Swedish Journal of Economics*, 74.

Niskanen Jr, W.A. 1971. *Bureaucracy and Representative Government*, Atherton, Chicago: Aldine.

Oakland, W.E. 1983. 'Income Redistribution in a Federal System', in G.R. Zodrow (ed.), *The Tiebout Model After Twenty-Five Years*, Academic Press, New York.

Oates, W.E. 1972. *Fiscal Federalism*, Harcourt, Brace & Jovanvich, New York.

Oates, W.E. 1973. 'The Effects of Property Taxes and Local Spending on Property Values: A Reply and Yet Further Results', *Journal of Political Economy*, 81.

Oates, W.E. 1985. 'Searching for the Leviathan: An Empirical Study', *American Economic Review*, 75.

Oates, W.E. 1989. 'Searching for the Leviathan: A Reply and Some Further Reflections', *American Economic Review*, 79.

Oates, W.E. & Schwab, R.M. 1988. 'Economic Competition Among Jurisdictions: Efficiency Enhancing or Distortion Inducing?', *Journal of Public Economics*, 35.

Oates, W.E. & Schwab, R.M. 1989. 'Theory of Regulatory Federalism: The Case of Environmental Management' (mimeo).

Pauly, M.V. 1970. 'Optimality, "Public" Goods and Local Governments: A General Theoretical Analysis', *Journal of Political Economy*, 78.

Pauly, M.V. 1973. 'Income Redistribution as a Public Good', *Journal of Public Economics*, 2.

Petchey, J. & Shapiro, P. 1991. 'Chariot Wheels and Rebellion: An Economic Analysis of the Inducement to Federate' (mimeo), Australian National University, Canberra.

Pisani-Ferry, J., Italianer, A. & Lescur, R. 1992. 'Regional Stabilisation Properties of Fiscal Arrangements', forthcoming in *The Economics of Community Public Finance*, special issue of *European Economy* (June).

Romer, T. & Rosenthal, H. 1979. 'Bureaucrats vs. Voters: on the Political Economy of Resource Allocation by Direct Democracy', *Quarterly Journal of Economics*, 12.

Romer, T. & Rosenthal, H. 1979. 'The Elusive Median Voter', *Journal of Public Economics*, 12.

Rubinfeld, D. 1987. 'The Economics of the Local Public Sector', in A. Auerbach & M. Feldstein (eds), *Handbook of Public Economies*, Volume 2, Elsevier, New York.

Sachs, J.D. & Sala-i-Martin 1989. 'Federal Fiscal Policy and Optimum Currency Areas' (mimeo), Harvard University, June.

Samuelson, P.A. 1954. 'The Pure Theory of Public Expenditure', *Review of Economics and Statistics*, 36.

Samuelson, P.A. 1955. 'Diagrammatic Exposition of a Theory of Public Expenditure', *Review of Economics and Statistics*, 37.

Scharpf, F.W. 1988. 'The Joint-Decision Trap: Lessons from German Federalism and European Integration', *Public Administration*, 66.

Scott, A.D. 1950. 'A Note on Grants in Federal Countries', *Economica*, 17.

Sonstelie, J.C. & Portney, P.R. 1980. 'Take the Money and Run: A Theory of Voting in Local Referenda', *Journal of Urban Economics*, 8.

Starrett, D.A. 1980a. 'Measuring Externalities and Second Best Distortions in the Theory of Local Public Goods', *Econometrica*, 48.

Starrett, D.A. 1980b. 'On the Method of Taxation and Provision of Services for Local Public Goods', *American Economic Review*, 70.

Starrett, D.A. 1982. 'On the Method of Taxation and Provision of Local Public Goods: Reply', *American Economic Review*, 72.

Stigler, G. 1957. 'The Tenable Range of Functions of Local Government', in USA Joint Economic Committee (ed.), *Federal Expenditure Policy For Economic Growth and Stability*, US Government Printing Office, Washington DC.

Stiglitz, J.E. 1977. 'The Theory of Public Goods', in M. Feldstien & R.P. Inman (ed.), *The Economics of Public Services*, Macmillan, London.

Stiglitz, J.E. 1983. 'The Theory of Local Public Goods Twenty-Five Years After Tiebout: A Perspective', in G.R. Zodrow (ed.), *Local Provision of Public Services: The Tiebout Model After Twenty-Five Years*, Academic Press, New York.

Sugden, R. 1982. 'The Economics of Philanthropy', *Economic Journal*, 92.

Tiebout, C.M. 1956. 'A Pure Theory of Local Expenditures', *Journal of Political Economy*, 64.

Tresch, R.W. 1981. *Public Finance: A Normative Theory*, Business Publications, Texas.

Tullock, G. 1969. 'Federalism: Problems of Scale', *Public Choice*, 6 (Spring), 19–29.

US Advisory Commission on Intergovernmental Relations 1981. *Interstate Tax Competition*, ACIR, Washington DC.

US Advisory Commission on Intergovernmental Relations 1991. Interjurisdictional Tax and Policy Competition: Good or Bad for the Federal System?, ACIR, Washington DC.

Walsh, C. 1987. 'The Distribution of Taxing Powers Between Levels of Government: The Possibility of State Income Taxation Reconsidered', in G. Brennan (ed.) *Constitutional Reform and Fiscal Federalism*, Centre for Research on Federal Financial Relations, ANU, Canberra.

Walsh, C. 1990. 'State Taxation and Vertical Fiscal Imbalance: The Radical Reform Options', in C. Walsh (ed.) *Issues in State Taxation*, Centre for Research on Federal Financial Relations, ANU, Canberra.

Walsh, C. 1991. 'Reform of Commonwealth–State Relations: 'No Representation Without Taxation', Discussion Paper No. 2, Federalism Research Centre, ANU, Canberra.

Warr, P.G. 1982. 'Pareto Optimal Redistribution and Private Charity', *Journal of Public Economics*, 19.

Wildasin, D.E. 1977. 'Public Expenditures Determined by Voting with Ones' Feet and Public Choice', *Scandinavian Journal of Economics*, 79.

Wildasin, D.E. 1980. 'Locational Efficiency in a Federal System', *Regional Science and Urban Economics*, 10.

Wildasin, D.E. 1983. 'The Welfare Effects of Intergovernmental Grants in an Economy with Independent Jurisdictions', *Journal of Urban Economics*, 13.

Wildasin, D.E. 1984. 'The Welfare Effects of Intergovernmental Grants with Distortionary Local Taxes', *Journal of Public Economics*, 25.

Wildasin, D.E. 1985. 'Income Taxes and Urban Spatial Structure', Journal of Urban Economics, 18.

Wildasin, D.E. 1986. *Urban Public Finance*, Academic Publishers, Harvard.

Wildasin, D.E. 1987. 'Nash Equilibria in Models of Fiscal Competition', *Journal of Public Economics*, 35.

Wildasin, D.E. 1990. 'Budgetary Pressures in the EEC: A Fiscal Federalism Perspective', *American Economic Review* (papers and proceedings, May), 80.

Wildasin, D.E. (forthcoming). 'Income Redistribution in a Common Labour Market', *American Economic Review*.

Williams, A. 1966. 'The Optimal Provision of Public Goods in a System of Local Government', *Journal of Political Economy*, 74.

Wilson, J. 1985. 'Optimal Property Taxation in the Presence of Inter-Regional Capital Mobility', *Journal of Political Economy*, 18.

Wilson, J. 1986. 'A Theory of Inter-Regional Tax Competition', *Journal of Urban Economics*.

Winer, S.L. 1983. 'Some Evidence on the Effects of the Separation of Spending and Taxing Decisions', *The Journal of Political Economy*, 91.

Zax, F.S. 1989. 'Is There a Leviathan in Your Neighborhood?', *American Economic Review*, 79.

Zodrow, G.R. & Mieszkowski, P.M. 1983. 'The Incidence of the Property Tax: The Benefit View Versus the New View', in G.R. Zodrow (ed.), *Local Provision of Public Services: The Tiebout Model After Twenty-Five Years*, Academic Press, New York.

Zodrow, G.R. & Mieszkowski, P.M. 1986. 'Pigou, Property Taxation and the Under-Provision of Local Public Goods', *Journal of Urban Economics*.

FEDERALISM RESEARCH CENTRE
DISCUSSION PAPER SERIES
ISSN 1036 8655

No. 1 Christine Fletcher, *The Institutional Logic of Program Management in the Australian Federal Sprawl*, June 1991.

No. 2 Cliff Walsh, *Reform of Commonwealth–State Relations: 'No Representation Without Taxation'*, August 1991.

No. 3 Christine Fletcher, *Responsive Government: Duplication and Overlap in the Australian Federal System*, August 1991.

No. 4 Christine Fletcher & Cliff Walsh, *Intergovernmental Relations in Australia: Managerialist Reform and the Power of Federalism*, September 1991.

No. 5 Brian Galligan & David Mardiste, *Labor's Reconciliation with Federalism*, September 1991.

No. 6 Campbell Sharman, *Reporting Federalism: The Press and Coverage of the Special Premiers' Conference 1990*, September 1991.

No. 7 Cliff Walsh, *Fiscal Accountability, Vertical Fiscal Imbalance and Macroeconomic Management in Federal Fiscal Systems*, forthcoming 1992

No. 8 Brian Galligan, *The Character of Australian Federalism: Concurrent Not Coordinate*, forthcoming 1992

No. 9 Brian Galligan & Cliff Walsh, *Australian Federalism Yes or No*, December 1991.

No. 10 Neil Marshall, *Intergovernmental Managerialism: Appropriating the Universities*, December 1991.

No. 11 Nick Greiner, *That Obstructive Spirit of Provincialism Has Been Curbed*, January 1992.

No. 12 Cliff Walsh (with contributions by Jeff Petchey), *Fiscal Federalism: An Overview of Issues and a Discussion of Their Relevance to the European Community*, February 1992.

No. 13 Christine Fletcher, *The Australian Territories and New Federalism*, March 1992.

No. 14 Brian Galligan & Georgina Lynch, *Integrating Conservation and Development: Australia's Resource Assessment Commission and the Testing Case of Coronation Hill*, March, 1992.

No. 15 Taryn A. Rounds, *Tax Harmonization and Tax Competition: Constrasting Views and Policy Issues in Three Federations*, March 1992.

Discussion Paper Discussion Paper Discussion Paper