Optimal Areas for planning, local economic development and transportation

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Abstract

Government policies are designed and implemented at many spatial levels. Even explicitly 'spatial' policies such as land use planning, however, have historically often been implemented as if the spatial level of decision making/implementation was irrelevant to the success of the policy. This paper asks whether one can identify spatial levels appropriate for different categories of policy. It looks specifically at three 'spatial' policies, land use planning, local economic development and transport. I argue that there are four basic principles to guide the choice of spatial level at which to design and implement such policies. The first is that conditions vary across space in ways that mean that specific policies need to be tailored to regional or local circumstances. The second is that the geographical area over which a policy's benefits can be accessed should, so far as possible, coincide with the area over which its costs are incurred (whether direct or indirect or non-monetary costs) so effects are internalised. Principle three is to identify any significant economies of scale or scope affecting the policy area. Principle four is to identify potential synergies and co-ordination challenges within and between policy areas, so that as far as possible the policies can be co-ordinated in their implementation. Clearly these principles are not categorical and gains in terms of one may have to be offset in terms of costs from not fully meeting others. Equally there may be policies where more than one spatial level is appropriate. But thinking through the implications of these principles should help us make better decisions about the level at which policy interventions should be determined and implemented. Applying them may conflict with some traditional ideas, such as the Tiebout principles.

Key Words: Policy Implementation; Land Use Planning; Local Economic Development; Transport Infrastructure; Spatial Spillovers

1 Introduction

Government policies are designed and implemented at many spatial levels: at the truly international scale – for example, trade policies or global regulation; at the supra-national scale – for example, polices of international groupings; some, such groupings of nations cover only development or trade, but some cover far more fields, as in the European Union. Some

policies are designed and implemented at the national level – typically defence, legal systems or fiscal policy; and some at the sub-national level. The spatial level at which a particular policy is formulated or implemented is not just a matter of chance but does seem to have a considerable purely random component about it. Moreover polices are frequently formulated at one level of government, often national, but implemented at another, for example, regional or local.

Indeed policies frequently occur at more than one spatial level. In the European Union, for example, financial policies and management of the banking system are the responsibility of both national and supra-national bodies. This is effectively the case in the US, except in the US, it is seen as being at the national and regional scales. Education policies typically have a national framework and regional and local implementation as well as local elements of design. In some countries, local or regional governments have great autonomy with their own fiscal capacity as well as powers to design and implement their own policies. In others, local government derives virtually all its revenues from central government and acts as little more than central government's implementation agency.

Many types of policy have an intrinsic spatial dimension. Many, for example, are services of some kind which necessarily require that the recipient of the services – education, health care or social services, for example – receives them personally. The result is that they have to be distributed locally where people live. Other public policies are even more 'spatial' in that not only do they have to be designed to be implemented locally but they also directly influence the pattern of spatial development. It is these types of policy that I am singling out in this paper: most obviously transport policy, policies for local or regional development, and land use planning or regulation policies. Most such 'spatial' policies, in the UK as elsewhere, have grown up piecemeal over time, often in an *ad hoc* manner or as a political response to some pressing problem. Systematically assessing their logical consistency and their relationship to current analysis of spatial economic processes is long overdue.

Given the haphazard way in which spatial policies have grown up a recent British initiative is surprising and welcome. The most powerful and economically informed ministry, the Treasury, has launched a review called 'Levels of Intervention', the aim of which is to re-think them coherently and on the basis of first principles. This has considered individual policy areas – there have been two reviews already of the Land Use Planning system (Barker, 2003, 2004, 2006a and 2006b) and more recently a review of transport policy (Eddington, 2006). The Levels of Intervention review is associated with these since both sets of reviews highlighted the lack of coherence for policy of the spatial units at which they were implemented.

If we look at the roots of spatial policies – not just in the UK – we can see how piecemeal and *ad hoc* their origins and design are and how this is still reflected both in the policies themselves but also in the levels of government and geographic units at which they are implemented. With the possible exception of transport policy, they originated in an era when there was a much stronger belief in state direction and what could be achieved with central planning. We can illustrate this by looking at the origins of three of the most important types of spatial policy: regional development, concerned with regional inequalities; urban regeneration/neighbourhood policy; and land use planning. In the UK, regional policy can be traced back to the report of the Barlow Commission (1940). This was strongly influenced by the then new ideas of Keynes and the threat to the prosperous south and east of England from enemy bombs. A major part of the report and its recommendations was concerned with the

strategically dangerous 'overconcentration' of resources in the rich south and east and the need to protect the new industries, especially aircraft and munitions, from exposure to attack from Germany. A similar motivation underlies French 'Growth Pole' policy and the creation of the French (now European) aerospace industry in Toulouse, in South West France. Why is the second most important concentration of the aerospace industry in the world concentrated in Toulouse? Because between the two World Wars, Toulouse was the French city furthest from Germany which had a significant university and engineering industry. This was reinforced during the Gaullist era in the late 1960 with the decision to invest heavily in a set of complementary industries and agencies in Toulouse designated a Growth Pole for developing a poorer region. Reasons for policies change but the aims of the policy are strangely familiar. The EU now has its own spatial planning policy, the European Spatial Development Perspective (ESDP, 1999) with the overt aim of reducing 'overconcentration' - now seen as the enemy in its own right (*'Over' concentration is, of course, precisely the degree of concentration which is undesirable. It is a rhetorical device rather than a scientific judgement. All concentrations of activity – more transparently called 'cities', 'city-regions' or 'urbanised regions' - represent a trade-off between the costs of concentration - such as higher space costs, congestion, or pollution – and the benefits in the multifarious aspects of agglomeration economies and widening choices. A more scientific question is whether what we observe represents an economic and social optimum.)*

Land use planning in Britain is still based on the 1947 Town and Country Planning Act – part of post WWII reconstruction. This expropriated 'development rights' of all owners of land except the Crown. Although one of the aims of its founders – to establish the state as the sole developer – has been abandoned – the powers to control development have been enhanced over the years since 1947. One can clearly see it as the last surviving structure of Fabian Socialist utopianism in the UK and it still implicitly enshrines a belief in a benign and efficient central planning system.

Urban regeneration policy started as a political response to central city riots, initially in Detroit in 1967 or in the Los Angeles neighbourhood of Watts in 1968. In Britain, the themes were taken up in the Inner Area Studies (Department of the Environment, 1977) and policy makers went into overdrive after the riots in the London neighbourhood of Brixton and in Toxteth in Liverpool in 1981. The policies that were implemented, however, were essentially political and not based on any scientific analysis of how cities worked, what they contributed in economic and social welfare terms or how social and economic segregation or exclusion related to the wider causes of social inequality.

Transport policy has grown up somewhat differently. In part, this is because it is mode-based with a plethora of agencies for both rail and buses and roads but none with any role for co-ordination. Both bus and rail policies until the privatisation of rail and the deregulation of buses during the Thatcher era, embodied a socialist ideal. The railway system was nationalised and many bus companies were municipal enterprises. In addition, there was, and still is, a separate Highways Agency, responsible for the major road network; a national ports authority and varying arrangements for airports. The result was a total lack of co-ordination between modes; and between transport infrastructure provision and development.

Privatisation and deregulation of the rail and bus industries was done more on ideological and political grounds than any thought-through redesigning of the system to improve co-ordination. In the process valuable network economies have been lost and co-ordination between modes has become even worse. It appears possible that at least some of these

deficiencies in basic policy structure design will be addressed following the Eddington Report (Eddington, 2006).

What all these policies lack is co-ordination between policy arenas and agencies and intellectual coherence or an adequate base in evidence. There is little acknowledgement either of the role of markets or of the implications of problems of market failure. There is no consideration of the interaction of the policies with each other and with other policies. Planning of land use is, of course, a vital function. Land markets have many imperfections and unless they are subject to regulation it is unlikely that they would produce a socially optimal outcome. There are interdependencies between uses of adjoining parcels of land that create significant problems of externalities; there are important classes of public goods such as amenities, open land and wild life habitats which means land markets without public intervention would be unlikely to supply a socially optimal quantity of such land; and there may be a valuable contribution to the quality of the built environment, planning can make. But a central feature of land use planning is that it is about the allocation of a scarce resource: private space in gardens and houses and space for economic activities. Thus, it controls the supply of a range of scarce 'goods' and so has a significant role in determining prices – of houses and urban land for private and commercial use. Yet the British system of land use planning – in common with most others – actually excludes price information from consideration in making decisions about how much land to release for categories of urban use. If not enough land is released relative to the demand for it, this inevitably drives up prices. But this is information planners are not only not aware of but which, in the UK, they are specifically excluded from taking into account. This creates a whole range of problems not only of a directly economic type but for the planning process also, since it increasingly drives the political process within which British planners, at least, have to act and decide.

While I am particularly drawing on the case I know best, the UK, this is put into a wider analytical and institutional context. The principles involved may be universal in their application but institutions and context vary in important ways. It is instructive to analyse the ways in which analytical principles interact with institutional arrangements to imply differing outcomes of emphasis in different contexts.

2 The Tiebout tradition

If we want to think more coherently about the most appropriate spatial units at which policy decisions about the provision of local public goods are made, Tiebout's analysis seems a good starting point. Tiebout (1956) is one of the most widely cited papers in spatial economics or local public finance. Its motivation was to provide a possible solution to the problem of how to provide appropriate types and quantities of (local) public goods: outcomes people valued, provided by government but for which there were no effective markets. The analysis applies to local public goods, in that it is confined to the class of policy-provided 'goods' the consumption of which is determined by the local administrative jurisdiction in which a person lives. Given certain assumptions, then, by voting with their feet and choosing their local community on the basis of the offer of local public goods and taxes it provides, it can be that optimal quantities and varieties of local public goods will be provided.

This was an important and influential paper and its results need to be borne in mind. Competition between local governments is potentially welfare improving and socially beneficial. To achieve this it is necessary to have a relatively large number of small municipalities in any given larger urban region. My arguments should always be interpreted against this background. The problem is that Tiebout's result depends on strong conditions. It

requires that i) there is local self determination with respect to the quantities and types of local public goods to provide; ii) people are free to move from one municipality to another and at low cost; iii) that the local public goods provided are paid for out of local revenues; and iv) there are not significant spillovers or externalities between the policies paid for and implemented in one local municipality and the welfare (whether because of a spillover of benefits or of costs) in other local communities.

The principles deriving from Tiebout's analysis have universal application; but institutional arrangements and types of policy vary widely. More than most countries, the US meets the necessary requirements for the 'Tiebout outcome' to be a powerful guide to policy. Not only are people free to choose exactly where to live but moving is low cost by international standards. Local and State governments have substantial and guaranteed autonomy and fiscal capacity. One result is that types of policy and levels of local taxation vary widely by international standards. If you want to you can live in a community that in principle has no land use regulation by public policy; or in communities with tough zoning and growth boundaries. But the conditions allowing the 'Tiebout outcome' to dominate show great international variation. At some extremes, local governments have almost no fiscal capacity and very limited power to determine local policies. They are virtual agents of national government. In some countries, people have little choice about where they live.

This is a matter of facts: what powers and fiscal capacity do sub national governments have and how easy and cheap is movement between communities. There is also a more analytical issue. Central place theory identifies the 'range' of goods. Lösch analyses this in terms of economies of scale in production interacting with distance costs, associated with consumption – whether transport costs of the goods themselves or of people to get to the point of delivery for services. Central place theory argued that there was systematic variation in the 'range' of individual goods and services and that this variation generated the forces that led to there being a hierarchy of urban places. Goods and services with higher 'ranges' (higher order goods or services) had larger market areas and were produced in higher order central places: bigger cities. Central place theory has its critics but some of its central insights are powerful and are embodied, for example, in the New Economic Geography.

But they also apply to the provision of (local) public goods. These, too, are likely to be subject to differences in economies of scale. Cost of provision will fall and efficiency will rise in larger and more specialised units, perhaps with agglomeration economies associated with their production. This will not be true of all local public goods and the importance of such economies of scale or agglomeration will vary between them. Equally accessing local public goods may be possible at widely differing distances. Some, for example clean and secure streets, may be capable of being produced and accessed at the very local level. That may be one reason for the growth of gated communities or the popularity of high-rise apartments in dangerous cities such as San Paulo. Effective secondary schools require a larger population (and the more specialised they are, the larger that population may need to be) and can be accessed for a given cost at greater distance than can kindergartens.

I will argue below that the three types of policy I am calling 'spatial', transport, local economic development and land use planning or regulation, typically have extensive geographical effects and are subject to significant economies of scale. The application of strict Tiebout arguments, therefore, requires such policies to be implemented at larger spatial scales than is the case for policies designed to provide local public goods which have a restricted range. But there are also costs associated with multiplying levels of government. This means

whatever spatial pattern of government levels we end up with is likely to be a compromise. Nevertheless, there are some general principles to apply and there may be more effective ways of securing more optimal spatial scales without multiplying government units.

So, based on these considerations, what general principles can one identify to guide us in choosing the most suitable geographic scale at which to implement policies? There would seem to be four:

1. The first is that conditions vary across space in ways that mean that there is a plausible case for local tailoring of policies to regional or local circumstances.
2. The second principle to take into account is the need to identify the geographical area over which a policy is likely to impact or have costs and over which its benefits can be accessed and, therefore, the extent to which there are likely to be spillovers at particular spatial scales.
3. Principle three is to identify whether there may be significant economies of scale or scope affecting the policy area.
4. Finally, principle four is to identify potential synergies and co-ordination challenges within and between policy areas. For example, economic development may require physical development, including building transport systems. This may seem blindingly obvious but the spectacle of support for more jobs and opposition to any building is a common one in Britain because of the failure to align incentives or make decisions over appropriate spatial units.

3 Land use planning

Let us look at how these principles might apply to each of the three types of 'spatial policy' I have identified (*The list is not necessarily exhaustive. For example, neighbourhood regeneration policies are expected to have specific spatial economic and social impacts but I will not look at these in what follows. One could also probably argue about other specific types of policy. I would just claim that land use planning or regulation, local/regional economic development and transport are the three most obvious*.) . The first condition would seem to apply to the provision of all local public goods and need not greatly detain us. When we look at land use planning with the second principle in mind, there are important – I would argue vital – issues concerned with the spatial scale of spillovers because the spatial extent of costs is local but the impact of policies may be extensive. There are also significant issues related to economies of scale or scope; and there are certainly important synergies between planning policy and other policy areas so a considerable need to co-coordinate across policies areas.

Land Use Planning: arguments for and against devolution

There would seem to be two primary reasons in favour of decentralising decisions about land use to local governments. The first is the general presumption that there are gains from increasing choice in the provision of local public goods. Land use planning is significantly about providing such local public goods: the type of (built) environment, the extent of preservation of public open space or wildlife habitats, for example. This is the well established Tiebout (1956) argument outlined above. This is a powerful argument but is valid if and only if 'externalities' are fully internalised in decision making. As I argue below, this condition is almost certainly not met – because of principle two – the spatial scale of spillovers has to be appropriate for the geography of the tier of government implementing a policy. Both costs and benefits need to be internalised in decision making.

There is a second reason for devolving planning policies to a local level and that is that conditions do differ between geographic housing and real estate markets. As already noted planning is about many things; but it is importantly about the allocation of a scarce resource: land for urban purposes; land for living space. Demand and supply conditions for environmental goods, for planning produced amenities and for space show great spatial variation. Supply of these amenities is mainly determined by nature - for example beautiful landscape or coastline. But demand is mainly determined by incomes (see Cheshire and Sheppard 1998).

For example, we find estimates of the income elasticity of demand for accessible open space to be close to 2 (Cheshire and Sheppard, 1998). Or consider the 'value' placed on publicly accessible open spaces such as Epping Forest, a mountain reserve such as the High Tatras, a heritage coastline or a National Park, such as Britain's Lake District. Epping Forest is a pleasant but not particularly remarkable area of old woodland which drives a wedge into the north eastern fringes of London: the Lake District contains some of the most beautiful scenery in England and was the major inspiration for one of our great national poets, Wordsworth, and for one of England's classic children's writers, Beatrix Potter. Both areas are protected by the planning system; both are highly valued. But the Lake District, like the High Tatras, is comparatively remote from population and is valued because of its intrinsic qualities which draw people to visit it from all over the world. Epping Forest is valued because of strong local demand (and comparative scarcity of local supply) for amenity open space in one of the most heavily populated and highest income areas Europe. So spatial variations in demand, as well supply, for space and amenities needs to be taken into account in local planning policy.

Nevertheless, there is a significant role for national – perhaps supra-national – standards. Just as it might reasonably be argued that access to education should not vary according to where within a country a person lives, so it seems reasonable that all citizens should be safeguarded by similar environmental, safety and design standards. However, there is also an important equity issue to consider. Might it not be argued that relative to incomes all citizens should - so far as possible - have equal access to housing? Or at least that policy should aim towards equalisation of the 'hedonic' price of housing attributes relative to incomes across the whole country? Apart from equity issues this would improve interregional labour mobility and help labour market flexibility.

As well as this argument for national standards on interregional equity grounds, affecting both environmental and design standards but also price : income ratios, there is also an issue – usually neglected - of intra housing-market equity. Land use planning produces important classes of amenities or local public goods – most obviously open space. Research shows that the benefits derived from most types of open space (excepting international attractions such as the Grand Canyon or the Alps) are local and decline rapidly with distance. If your house overlooks a park, you have a significant benefit and it is reflected in the market price of your house. If you own a house surrounded by open farmland that, too, yields a benefit and the value of that benefit is reflected in the market price of the house (see Anderson and West, 2006; Cheshire and Sheppard 1995; or Irwin, 2002). However, the evidence of these studies also shows that amenities can only be consumed if accessible (e.g. urban parks; 'greenbelt' protected by growth boundaries). Realising this also implies that the 'goods' planning produces, while provided by public policy, are differentially consumed by the affluent. This is most true of the open farmland at the edge of cities produced in Britain by the planning policy of 'urban containment' (or in Oregon by the growth boundary). The benefits from this policy accrue only to the owners of edge-of-city or 'periurban' houses or houses built before

planning policy came into force after 1947 and now having exceptionally high market prices. Since these are almost by definition the homes of the rich, public policy is systematically redistributing real welfare and asset values to the wealthiest (Cheshire and Sheppard, 2002).

Land Use Planning: the spatial scale of spillovers
This, in my judgement, is the most significant problem with land use planning and a powerful argument for devolving decision making only with great caution; and even then only to spatial units of government within which both costs and benefits of development are captured. As we will see this is not an easy task.

This need for caution arises as a result of two types of consideration. The first is the argument originating with Fischel (2001) about the political economy of planning decision making. As home ownership and real house prices rise, houses become increasingly significant as a part of people's financial assets. As financial assets, they have unusual characteristics: they are totally immovable and highly illiquid. Moreover, their value incorporates - via the processes of capitalisation already outlined - the value of all the amenities, neighbourhood characteristics and local public goods to which their precise location gives them access. The only way people can protect the value of their housing assets is by trying to maximise the value of these locational attributes – so, as voters, even without children, they vote higher taxes for better local schools (Hilber and Mayer, 2004); and, above all, they vote for planning authorities who will protect them against development.

The second consideration is the differing spatial range of the costs and benefits of physical development. For nearly all development the costs are very local, whether these are the costs of disruption, congestion, noise and pollution during construction or the loss of amenities and in asset values after the development is complete (bear in mind the point made above that the 'value' of open space as capitalised in house prices is very localised apart from a few exceptional cases).

The geographic range of the benefits, however, is very considerable – even for house construction the benefits will affect all residents of a given spatial real estate market which is probably best conceptualised as a Functional Urban Region (*We can adapt DiPasquale and Wheaton's (1996, p. 24) definition of a geographical real estate market: a geographic /spatial housing market is the area which 'encompasses all housing units that are influenced by the same economic conditions…*'). The benefits are in the form of small improvements in job opportunities and incomes and small reductions in the cost of housing. This last is particularly significant for non-home owners who tend to be poorer as a group than existing home owners; and for the young relative to the old. The relative range of these costs and benefits moreover, will vary with the form of the development. A small extension, or a single house in a newly subdivided lot, may have a very limited impact in terms of both benefits and costs; so not much is lost if decisions are taken at the local level. At the other extreme, a major transport development, such as a new airport, will have benefits at least at the regional scale and frequently at a wider scale still. In the notorious case of Terminal 5, at London's Heathrow airport, it is reasonable to argue that the benefits were at the national scale. Yet the initial planning authority was the local community, the Borough of London in which Heathrow was mainly located. For a substantial new housing development the benefits will certainly be at a regional scale.

A final point is the individual size of the benefits and the costs. The costs are substantial per affected individual while the benefits are very small per individual but spread over very large

numbers of people. So we have a situation analogous to the arguments for free trade: there we need to balance the significant losses of a small number of producers from, say, opening up textile trade to Chinese imports, relative to the benefits to all consumers from lower prices for clothing and other textiles. Because losses are large relative to the number of people involved, producers readily form lobbies against freeing trade in their sectors. But consumers, being numerous relative to their individual potential gains, seldom take to the streets to demand free trade.

So it is with planning. There is a powerful inbuilt asymmetry in decision making if decisions are devolved to a local level favouring NIMBYism (Not in My Back Yard). Decisions need to be taken at the most local scale feasible, subject to that level of government internalising both gains and costs. This implies different types of decision at different tiers of government, with major infrastructure decisions essentially being a national concern; it is interesting that both Barker (2006b) and Eddington(2006) recommend that planning decisions with respect to major transport infrastructure projects should be taken out of local hands and made the responsibility of a new national tier. Only small developments - such as extensions or single houses – should be left to the local level. Most decisions about land use and development are probably most effectively made at the level of a Functional Urban Region. A problem is that this is not commonly an actual level of government. In Europe it is almost accidental – with some Spanish regions and the Ile de France being the only obvious representatives.

Land Use Planning: economies of scale and scope
Two final points here: in devolving decisions to lower levels of government, we need to keep in mind the possibilities of economies of scale or scope. Loss of economies of scale probably imposes no significant constraint on devolving planning decision making. In so far as these are relevant in planning then, in principle, smaller units could buy in their planning services from larger ones which would gain from the economies of scale. However there almost certainly are 'economies of scope' which are relevant. The smaller the unit of government, the lower its capacity typically is to deal with complex decisions. So small local governments may not have the information to know that they need to buy in services from larger units or specialist providers or, if they do, not have the information and skills necessary to procure and manage such services effectively. In the UK, an obvious case is negotiations with would-be developers but making and implementing sophisticated strategic development plans may be another problem.

The second point relates to the costs of development. These are certainly real to those who suffer them. What is needed, therefore, is systematic Impact Fees on developers, paid to local communities to fund the necessary infrastructure. In addition, there is a case for direct compensation from developers to those house owners who are adversely affected by development. Given what has already been said, such Impact Fees and compensation would simply be capitalised in a (lower) price of land. There is strong evidence from those parts of the world where Impact Fees are paid by developers that this is exactly what happens (Ihlanfeldt and Shaughnessy, 2004). Their management, however, is probably subject to economies of scope.

Land Use Planning: issues of co-ordination
A further problem which arises from governmental habits of consigning 'planning' to the environmental and design box and not acknowledging its important economic function, is the failure to co-ordinate physical with financial planning. This is a serious problem in the UK but is common throughout Europe. Gaining the permission to develop is a necessary condition (at least it is in most EU countries) for development to occur but it is not a sufficient condition. For

development actually to occur there have to be the funds. Since private developers only take the trouble to commission plans if they think the development will be profitable, once permission is gained, the houses, retail facilities or other buildings, are usually built. Planners may know perfectly well that the development requires complementary development of infrastructure but – certainly in the absence of Impact Fees – such development is typically in the public domain and funding is via central or regional government. So the infrastructure does not necessarily get built.

The South East of England is a good example. The regional economy is very buoyant and the skills base and international accessibility excellent; so there has been much development, despite a rising tide of NIMBYism and consequent rising real prices for land and real estate. One factor adding to the NIMBY pressures is the real problem of congestion and pressure on utilities, such as water supplies. Developers do not fund these and investment in transport and other infrastructure to support the growth has got far behind the actual local growth. An example is the proposed East-West rail route under central London, Crossrail. Politicians have announced almost every year since 1989 that 'Crossrail has the go-ahead'. Yet Crossrail is not even off the drawing board. The reason is that the planning process has given the go-ahead but the finances have not been provided.

This illustrates the need to co-ordinate physical and financial planning. Another example is provided by Dublin. For a long period, from the late 1970s, Dublin Corporation was proposing a new commuter rail system and new highways. These were in the plans for the City and the necessary land was safeguarded from development. Unfortunately it was the national government which had responsibility for funding and no funds were made available. The result was to 'blight' great strips of Dublin for decades with individual property owners suffering considerable losses and not making any investments in the buildings and land they owned.

A further problem of co-ordination relates to incentives. The incentive for planning authorities to permit development of different types varies with the details of the fiscal system. Again to take the UK as an example, planning decisions are made at the most local level of government – the District or Unitary Authority. Most of the tax revenues received by such authorities are the result of transfers from central government. Local property taxes typically account for about 20 percent of revenues. Their outgoings are related to the number of inhabitants living within their areas, however. Worse than that, the tax system for business properties is such that all revenues from business property go to central government, directly. Local governments are still obliged to provide services to businesses. Thus, it costs the tier of government charged with decision making with respect to development a significant amount of money – and unpopularity with voters – if they grant permission. This is especially true of development for business use. Local politicians respond rationally to such an incentive structure by reinforcing the natural NIMBYist tendencies of their voters (*Encapsulated in the words of the retiring chair of the Reading planning committee in 1989 when asked what his major achievement had been. His reply was that during his period of office "Not a single new major office development has been approved. We managed to keep development down." (Reading Chronicle, 1989*)). That local government does respond to financial incentives, however, is witnessed by the loss of school playing fields and publicly owned recreation areas. Over the past 10 years nearly 1000 school playing fields a year have been built over in Britain. The reason is easy to find. Local authorities own them because they own schools and the same authorities are responsible for controlling where physical development occurs. So they gain financially from developing open spaces, highly valued by the local community, while not gaining from developing open spaces in private ownership which typically (because access is restricted to the owners themselves) are valued far less by the community (Barker 2003; 2004).

Indeed the only incentive for local governments to allow development of business premises in the UK is voters' fears of unemployment. In the least prosperous parts of Britain planning authorities constrain the supply of development to a much lower degree than is the case in the more prosperous parts and changes in the degree of planning constraints seem to be closely correlated with changes in local prosperity (Cheshire and Hilber, 2006). But this is a very suboptimal way of determining the degree of constraint on supply imposed by planning. It would be orders of magnitude more efficient to get better co-ordination between the financial incentives facing planning authorities and the wider desirability of development.

A final point with respect to co-ordination is between physical development and economic development. If the supply of housing or commercial floorspace is constrained, prices rise and the availability of modern premises is curtailed for expanding local firms. Regional and local economic development therefore has implications for land use planning. In the UK and many other countries, however, different levels of government and sometimes different branches of government are responsible for economic as opposed to physical development. Again to take the UK as an example, economic development is typically the main responsibility of regional agencies responsible to the Department of Trade and Industry; physical development, control of land use, is the responsibility of the most local unit of government answerable to the Department of Communities and Local Government. This does not improve co-ordination!

4 Regional and Local Economic Development

This may typically be mainly the responsibility of regional agencies in the UK but there are also many agencies and groupings operating at the local level and the 'regions' in the UK are defined (Wales and Scotland are partial exceptions) for administrative and statistical reporting purposes not because they represent self-contained local economies.

Economists are typically sceptical as to the capacity of government agencies to efficiently promote local economic development. Give agencies a budget and no matter how big the budget is they will find ways of spending it. There is some evidence for this in Europe. The Welsh Development Agency has a substantial budget but the evidence does not suggest it is particularly effective at promoting economic development in Wales. Size may not be that important but sophistication may be relevant.

There are significant arguments relating to the 'range' of local economic development policies, however. If we suspend our disbelief and allow the possibility that such policies could increase local economic growth then we will see that they are 'producing' a local quasi-public good. People or agents in surrounding jurisdictions cannot be excluded from any benefits produced (in the form of more job opportunities, growth in property values or higher wages). If policies paid for and implemented by the central city of a metro region increase output and/or employment growth in its territory it will be impossible to exclude commuters from the surrounding municipalities from sharing in the benefits even though they pay no taxes within the central city. There will also be a zero opportunity cost in 'consumption' of the growth dividends the policy may yield: if your rents rise, so do mine and the increase in yours is not a cost to me; if your employment opportunities improve that, too, is not a cost to mine.

There is thus a problem of market failure. Growth promotion polices will only be likely to be produced by government(s) or some 'club' of actors, usually local and regional governments and private sector agencies. In addition, there will be problems of spillover losses and transaction costs. Any gains from extra growth may leak out to benefit agencies or residents of surrounding

municipalities who have not contributed to the costs of the 'growth promotion club'. The spatial extent of this leakage will depend mainly on the extent of the commuter field of the metro-region since labour incomes are likely to account for the largest single part of any growth dividend and a high proportion of property will be owned by house owners who work in the local economy. There will be some leakages to non-local owners of capital and property, however. In general, therefore, the closer the coincidence in the boundaries of the jurisdiction or governmental unit providing local development or 'growth promotion' policies with those of the economic region within which their impact is (largely) contained, the less will be these spatial spillovers to non-contributors. In addition, the larger is the central unit of government of an economically self-contained urban region relative to the size of that region as a whole, the lower will be the transactions costs in building a 'growth promotion' club.

Local economic development or 'growth promotion policies' should be thought of in much broader terms than those their advocates often focus on: attracting mobile investment. Growth promotion policies in a wider sense include: having a concern for efficient public administration so that uncertainty is reduced and decisions are made transparently and quickly; making sure relevant infrastructure is provided and maintained; pursuing co-ordination between public and private investment; providing training which is relevant and effective; and ensuring that land use policies are flexible and co-ordinated with infrastructure provision and the demands of private sector investors. It could also involve giving a higher priority to output growth as opposed to local equity or environmental outcomes.

More effective local growth promotion policies need not necessarily involve spending more, even on infrastructure, so a simple measure of local expenditure is unlikely to capture their efficacy. Grand projects such, perhaps, as the Guggenheim museum in Bilbao, London's Millennium Dome or a trophy metro system in Toulouse, may be expensive but not very productive; large location bribes or expensive tax holidays to inward investors may likewise show little return. Efficient public administration and reduction of uncertainty for private investment by rapid public decision-making, clearly defined land use policies and infrastructure planning and provision, may cost less than their inefficient alternatives but be highly productive in terms of local growth.

Growth promotion policies, nevertheless, cost resources and there will be transactions costs in forming and maintaining an effective 'club'. The expected growth gains any club might achieve will vary with local circumstances and existing policies. The club's expected gross payoff will be a direct function of the additional growth that it expects it can generate. If such policies have any impact on actual growth rates then greater efficiency of growth promotion policies will be directly reflected in differential growth rates of metro-regions. The more closely aligned are the boundaries of the 'growth club' associated with a metro-region with those of the metro-region's economic region, the more likely it is that more efficient local growth promotion policies will be developed because there will be less spillover losses of growth dividends to non-club members.

The economic boundaries of a metro-region will reasonably be those which define its commuter catchment area to a high degree of self-containment. In the US the (S)MSA would approximate to such a definition of an 'economic region'. Functional Urban Regions (FURs) are likely also to be economically self-contained in the required sense. Since the boundaries of a city's economic region compared to any others that might exist for a city – most obviously political boundaries – contain the maximum proportion of any benefits that might be generated by local growth promotion policies, for a given potential gross growth gain, the expected gain for any growth club will fall as the size of the territory it covers falls in relation to that of the (S)MSA or FUR

within the boundaries of which the 'club' is located. This is because as the size of the territory the club represents falls with respect to the size of its economic region, so the spillover losses from the club's territory increase. Equally, assuming other factors are constant, the expected net payoff would fall as the transactions costs incurred to form the club increase. Transactions costs will be positively related to the number of relevant potential members and the institutional dominance of the lead actor (which we can assume will be a governmental unit). The lead actor is highly likely to be the government of the central city or a public private partnership including that government. Again, having a larger and more influential government agency (the government of the core city) will reduce transactions costs. Thus expected net benefits for a growth promoting club will increase and transactions costs fall as the size of the largest governmental unit increases relative to the size of the economic region (whether approximated as the (S)MSA or the FUR).

These arguments suggest a testable hypothesis. The advantage of European data for testing it is that there is great variance in the relationship between the administrative boundaries of cities and those of their economic regions (defined as FURs). Testing the hypothesis described above provides quite strong statistical evidence in its support (see Cheshire and Magrini, 2007). Once all other relevant factors have been taken into account there seems to be a positive and significant relationship between FUR growth rates and the size for the FUR relative to the size of the largest governmental unit associated with it. This varies from highly fragmented metro-regions such as Valaciennes in France, where not much more than 10 percent of the FUR population live in the central city commune, to some Spanish cities which have a strong regional tier of government significantly larger than the FUR itself.

There is thus an argument in principle that local economic development policies should be the responsibility of a level of government with boundaries corresponding to those of self-contained economic regions and some empirical evidence suggesting that such arrangements are more effective, other things equal. Considerations of economies of scale do not seem that relevant although there may be economies of scope: expertise is scarce. In addition, the need to co-ordinate local economic development policies with those affecting real estate and planning and also those concerned with infrastructure, especially transport infrastructure, have already been noted.

5 Transport policies

Transport policies obviously cover many functions: regulation, safety, infrastructure planning, development and provision, and pricing. A mix of private and public actors and agencies commonly provides transport and the mix varies considerably from country to country. One distinction is particularly useful in the present context: the distinction between 1) transport largely serving local journeys to work, to shops and for recreation; and 2) transport linking regions or countries. Air and sea transport are overwhelmingly the latter while road and rail transport are significantly associated with journeys to work and other local or intra-regional travel. A feature of transport systems is that there are substantial economies of scale but an important element of those economies of scale derives from network economies and the co-ordination of modes to extend the networks of each mode.

At the risk of oversimplification one can argue that policies for type 2) transport, linking regions and countries, are properly the concern of national and international government or agencies while policies for type 1), intra-regional transport, belong at the scale of the metro-, economic or Function Urban region. Again, the logic is driven by Principle 2: that is to internalise the costs and benefits of decision-making as effectively as possible. The presumption for competition

between jurisdictions flowing from Tiebout (1956) does not seem convincing since local areas which are significantly smaller than FURs will not internalise externalities.

This is striking in London where individual Boroughs – of which there are 32 in the Greater London administrative area, itself only two thirds the population of the London FUR, have significant responsibilities for transport policy. They control local roads, for example, and these are increasingly becoming reserved for local residents. This is achieved in two ways: kerb-side parking is for residents only and there is an increasing use of traffic restraining design in the road network making it as difficult as possible to drive through areas. This reduces through traffic and calms what remains so benefits local residents but is at the expense of the network economies of the road system as a whole.

A further issue is co-ordination between modes. This is particularly important in large and denser cities, as in Europe or Asia, in which a high proportion of journeys to work are by rail. This implies more sophisticated and complex network planning, co-ordinating modes and capacity in the network as a whole. Since governance of transport systems tends to be mode specific, there is a role for an overarching authority with responsibilities for the overall network. Again, this has tended to be a failing in the British context and was identified by Eddington (2006). There are residual Metropolitan Passenger Transport Executives in the largest provincial cities. As their name implies these have responsibilities for passengers only, not freight. In the capital, there is Transport for London. This has responsibility for the bus network, regulating taxis and the underground (metro) tube system. It does not cover surface rail, the dominant form of rail transport in London south of the Thames and for commuters coming into London from beyond the reach of the tube network. Moreover, its boundaries of responsibility rapidly fade away at the boundary of the Greater London Area.

6 Conclusions

Our systems of government, their boundaries and the areas of policy they control have tended to grow up in a very piecemeal and haphazard way. Although there is a presumption that competition between local jurisdictions increases choice in the provision of local public goods and is, therefore, to be recommended, this paper argues that that is only one of the relevant principles. There are reasons for not applying it to the provision of all local public goods. Apart from the practical issue that there may be significant restrictions, whether by regulation, cost of movement, culture or institutional constraints, on personal mobility, one needs to consider the spatial impact of the costs and the benefits derived from the provision of local public goods. In addition, there may be economies of scale or scope which favour the provision of certain types of local public goods or policies for fewer, larger spatial units.

These considerations seem to be particularly relevant in the context of three forms of explicitly spatial policy: land use planning; local economic development; and transportation. In the case of the first two, it is primarily because of the extensive geographical impact they have and in the case of land use planning that the spatial extent of costs is local while that of benefits (of permitting development) extends to the whole spatial real estate market or city-region. Thus leaving powers predominantly at the local level creates an inbuilt asymmetry in decision making favouring NIMBYism.

In the case of growth promotion policies, spatial spillovers of gains and transactions costs involved in building effective growth promotion ‘clubs’ also imply that the most efficient tier of government for implementing such policies will be economically self-contained metro-regions or Functional Urban Regions. This, too, is likely to be the most appropriate spatial

unit for transport governance for those elements of transport systems that serve commuters, shoppers and local recreational trips. Thus, in all three cases there are arguments for implementation at an extended city-region level. If all three were implemented at a single level, moreover, this would have the further advantage of making co-ordination more likely, since all three fields of policy are interdependent.

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