

PART I
Chapter 2

**Competitiveness, Liveability
and Strategic Vision**

2.1. Introduction

Metro-regions are undoubtedly important actors of national economies, although they are not always synonymous with wealth. Overall, city size is positively associated with income. Capital cities, with their distinctive range of occupations and sectors, are at the fore. Thanks to their capacity to attract labour and firms from elsewhere within and across countries, metro-regions have a higher GDP per capita than their national average (66 out of 78 metro-regions). And most metro-regions also have higher labour productivity levels than their country average (65 out of 78 metro-regions). Metro-regions tend to have a more favourable demographic structure than their national averages as well, with lower dependency ratios. Not surprisingly, these regions tend to have faster growth rates than their countries. Yet, overall performance of metro-regions does have some limits. First, there are important exceptions to the group of above national average well performing metro-regions, some ostensibly “dysfunctional”. Moreover, differences of output, productivity and employment from national averages are not so large. And after a certain threshold (around 7 million) the city size and income association becomes negative, probably due to congestion costs and other diseconomies of agglomeration. Finally, the generally strong economic performance of metro-regions frequently comes at a cost: unemployment, inequalities, and various indicators of a lack of social cohesion (such as crime rates) tend to be higher.

Many policy issues emerge from metro-regions’ performance. In the present chapter we shall first examine the balance between positive and negative effects of metro-regions as well as the debate over their impact on the rest of their country. Does the metro-region draw skilled labour, capital and other resources away from other regions, which might have been deployed to enhance local dynamism? Or do other regions benefit from the spill-over effects of the metro-region? Second, we consider the challenge of overall strategic vision that seems to be needed if both the potentiality and problems of these regions are to be addressed. Central to the findings in Chapter 1 is that labour productivity is the principal determining factor in accounting for superior performance of one metro-region related to the others. While detailed comparative statistical breakdowns of the economic activities in which metro-regions concentrate are not available, there is some individual empirical evidence that many highly productive metro-regions specialise in high-tech and advanced services sectors, with R&D and other

knowledge-related activities at the fore. Access to large quantities of skilled human capital appears to be the fundamental characteristic at stake. How to make the best use of existing assets – tangible and intangible? How to foster the advantages of clustering whilst maintaining those of diversity? Finally, many social and environmental trends appear to emerge directly out of the dynamic, complex setting of the city, but their implications are often ambiguous. How to address “liveability” in highly concentrated urban spaces? How to deal with congestion, concentrations of social problems and lack of cohesion?

2.2. Dilemma I: positive or negative spillovers?

Metro-regions have become major centres of growth in contemporary economies; but are they the causes of such growth or its consequence? If the former, they need to be encouraged; if the latter, does their tendency to attract resources away from other regions do more overall harm than good? These questions are important, because metro-regions as such have both advantages and disadvantages.

2.2.1. The benefits of metro-regions

Large urban areas are expected to be associated with particular economic dynamism because they combine in particularly strong form the classic advantages of individual cities: accessibility, division of labour and competition, agglomeration effects, positive externalities for business, high stocks of physical, human and social capital.

- **Accessibility.** Individual cities already present advantages of accessibility over smaller towns; metro-regions multiply many of these. Because of the concentration of population and business activities, transport links between cities, in particular those within metro-regions, are usually good relative to those in the rest of a country. This makes it easier for firms located in these regions to access a wide range of choice in those resources (primarily labour, but also some elements of supply chains and research institutes) where proximity is important. In addition, transportation and communication networks multiply the connections among large cities which function in networked systems. The introduction of high-speed trains on the European continent further alters the time/distance equation. Urban rail centres are increasingly important as transport hubs within cities and as retail and commercial destinations in their own right, with a significant influence on street patterns and transport. Air bridges have been established between Tokyo-Sapporo, Melbourne-Sydney, New York-Chicago, and Los Angeles-San Francisco.
- **Division of labour and competition.** The size of urban labour markets and the range of firms located in cities permit competition and specialisation, which in turn raises efficiency. Because the market is large and the turnover

of goods is greater, producers are challenged to differentiate their products, thereby creating a demand for innovation. Because more firms are competing in the marketplace, there is a tendency for standards to rise progressively as well, with improvements in quality leading to gains in productivity. Sectoral division and diversification in manufacturing and services help to limit the effects of external shocks.

- *Agglomeration effects* reduce transaction costs because customers and suppliers can deal with each other more directly. In addition, individual large cities which attract global or regional corporate headquarters provide access to regional decision-makers; in the case of capital cities this includes national political decision-makers. Smaller cities located near these cities may have spillover gains from their proximity, further forging the metro-region. Certain infrastructure services can be offered sooner or more economically in cities, as is the case now with broadband telecommunications; other services, such as direct international air service, depend on a large local market. Certain specialised business services can only be offered profitably in larger cities (Quigley, 1998).
- *Positive externalities* for businesses are produced by the density of interactions among firms, research and education centres, public authorities and others within a large urbanised area. Knowledge spillovers and backward and forward linkages along supply chains are easier to capture within concentrated urban space.
- *Physical capital* in cities is not only measured by the equipment of firms, but also by the stock of buildings and infrastructure facilities. Much of the fixed capital stock of countries is invested in housing and commercial property; real estate price movements have a major impact on bank lending and consumer spending; and local governments often rely heavily on property taxes in their tax base. The construction sector is a major employer characterised by a skilled labour force, many small firms, and some major firms with significant international business.
- Some components of *social capital* may be directly related to scale and density of population, creating a multiplicity of local communities and neighbourhood organisations, and of civic groups that represent interests that cut across the population. Cities and metro-regions grow large through migration and immigration, producing a rich diversity of cultural backgrounds that is often the source of creativity and dynamism.

The association of many metro-regions with growth and innovation also relates to their resolution of certain paradoxes and trade-offs of contemporary economic activity.

1. The first is related to the constantly *increasing speed of both physical and electronic communications combined with continuing advantages of proximity.*

Much high value-added growth takes place in services sectors and in forms of manufacturing that, in contrast with much traditional manufacturing, are neither labour-intensive nor demanding of large factory sites or specific elements of physical geography. This gives many firms more choice in their physical location, from which process a preference for metro-regions is being revealed. The combination of continued advantages in proximity and accessibility alongside more rapid communications means, on the one hand, that there is a continuing need for some concentration of activities, but on the other, that this concentration can spread over a wider geographical space than in the past. This pattern favours neither small towns (which do not provide adequate concentration) nor the single concentric city with one central business district and a periphery of residential suburbs (which is an expensive form). Rapid transportation, as well as developments like tele-working, enable greater diversity of locations for both homes and businesses; but firms and workers still need easy physical contact at certain points. The kind of compromise between concentration and dispersal embodied in the multipolar metro-region makes this possible.

2. A second resolution of paradoxes typically found in metropolitan areas concerns demands for *change and flexibility in labour markets* combined with expectations of stable personal lives on the part of highly qualified labour forces. Metro-regions are also suitable for the needs of contemporary labour markets. Firms want the chance to recruit from large labour pools, and in many sectors offer relatively insecure employment. This is compatible with employees' needs to avoid major upheavals to their lives if they can be confident of finding new jobs within a certain geographical range.
3. Last but not least, metropolitan areas typically provide contrasting *advantages of specialisation and diversity*. The combination of specialisation and diversity raises important issues concerning agglomerations and clusters. There is a widely noted tendency for firms in certain industries, together with their supply chains and various specialised facilities (such as university research teams) to be geographically concentrated. Sometimes these are just aggregations of firms drawing on locally available resources; in other cases there are important knowledge exchanges among the participants, leading to the formation of clusters. However dependence of a geographical area on such aggregations in a single type of activity produces major problems if the industry concerned declines. There is particular vulnerability in a period of rapid economic change, like the present. Concentrated, populous metro-regions have a role in the resolution of this dilemma: these heterogeneous areas are better able than small cities to contain a number of clusters, ideally in sectors with diverse trade and

product cycles. If one industry collapses, there are alternative employment possibilities within commuting distance in other sectors.

Particularly important in the trade-off between specialisation and diversity is a likely, though not yet fully tested, association between agglomerations of the size and type of metro-regions and the concept of a *learning region or city* (OECD, 2001a) with multiple knowledge applications. The concept of the learning region centres on the hypothesis that the economic exploitation of creative and innovative knowledge depends, not just on the total of educated individuals working within a local economy, but on interactions among them and the organisations within which they work. These interactions run across the boundaries of firms, in particular along the supply chain, but they also involve other key groups. Most important are relations between firms and higher education and research institutes (discussed in more detail below). Also significant are links with locally embedded and specialised lawyers, accountants, venture capitalists and other professionals who acquire knowledge relevant to specific developments and sectors. This kind of knowledge is particularly important for innovative activities, where it cannot be assumed that up-to-date knowledge is readily available in, for example, general stock markets.¹ There is therefore a major role for the informal and interactive transfer of uncodified and often even tacit knowledge. These arguments partly relate to the question of specialised clusters discussed below, but they may have more general importance in facilitating knowledge transfers across sectors, and even in stimulating new activities.

This last point suggests a major potential advantage of metro-regions in harnessing *pluralism and diversity in knowledge*: until a point is presumably reached where diminishing returns set in, the larger an urbanised area, the richer and more diverse are the sources of and channels for knowledge creation and diffusion. For example, where there are a number of, rather than a single, university or research centre, there is both less risk of over-dependence on a single approach or set of programmes, and potential gains from cross-fertilisation. However, the mere existence of a diversity of institutions within a space designated statistically as a metro-region will in itself do nothing to ensure that interaction and inter-dependence occur. Left to themselves individuals often remain within their corporate or organisational boundaries. Metro-regions, and indeed individual cities, will only function as interactive spaces if they possess mechanisms that enable, encourage and reward groups and individuals to use them in that way. This may be partly a matter of public policy, partly of informal structures that develop in certain kinds of urban locations. Increasing knowledge of what these are and how they operate will be fundamental to determining whether or not individual metro-regions realise their potential.

2.2.2. Negative externalities of metro-regions

There are various negative externalities that are also associated with large concentrations of population. As externalities, they are not internalised by firms and households, and may only show up as a direct cost in the long term (e.g., high transportation cost, loss of productivity due to long commuting time or higher health costs due to a poor environment). They concern congestion costs, poor quality infrastructure, poor social, political and fiscal cohesion, and the often perverse impact of spatial planning on agglomeration effects.

- *Congestion costs* are particularly prominent, notably traffic congestion but also other forms of pollution, such as reduced air and water quality, high noise levels and degradation of green areas. Congestion is also implicated in high levels of mental illness and infectious disease, and limited access to recreational facilities, as well as in over-heated property and housing markets. Some of these costs are reflected in high prices for land, labour and other resources, which make the cost of living high in metro-regions, making life particularly difficult for the low-wage populations whose low-productivity labour is needed by many urban services. Those who can afford the high cost of commuting respond to these disadvantages of metropolitan life by living further away from the centres where they work, adding to time lost through extended journey-to-work times, increased need for transport infrastructure, and urban sprawl. Other congestion costs (such as pollution) are externalities, the burden of which is not reflected immediately in prices, but which can have strong indirect consequences (for example, in health costs). There are major examples of this, not only in recently and rapidly developing metro-regions in OECD countries (e.g., Seoul, Istanbul), but also in such long-established major cities as Paris, Tokyo and London, and even in some parts of much less densely populated and well-developed regions as Helsinki and Stockholm.
- *Poor-quality infrastructure* in some places arises because the costs of maintaining a good-quality physical environment among large concentrations of people and activities are high. This is most likely to be seen in a failure to maintain or improve areas with concentrations of social housing, or in areas where economic activities are associated with noise and other unwanted environmental effects. But the effects may not be limited to the directly affected areas alone. There might even be disinvestment from areas that are themselves otherwise well-served by infrastructure, but located within the wider urban environment that includes the neglected areas. In such cases there may be a relocation of households and firms to greenfield sites.
- *Poor social cohesion* may result from the anonymity and fragmented relationships found in large urban agglomerations. Large cities are often

associated with high levels of crime and anti-social behaviour, as well as problems of social isolation and negative externalities of distressed areas. These issues may be particularly important if groups from different cultural backgrounds remain largely segregated from each other. This is the other side of the coin of the gains that come from the diversity of large, heterogeneous populations.

- *Poor political cohesion*, in the sense that difficulties in mobilising resources to tackle collective problem, may also result where metro-regions comprise a number of cities and towns. It is difficult to organise such regions as wholes to deliver environmental, economic and social objectives. This may lead to higher overall costs to achieve a given level of environmental quality, which in turn can have knock-on effects on competitiveness.
- *Poor fiscal cohesion*. The relationship between taxation and public spending in metro-regions can become very unbalanced because their growth has produced patterns of use of urban space that no longer correspond to the existing administrative and political boundaries of local government and fiscal arrangements. This may take the form of a fiscal deficit for the major city or cities, which are responsible for a wide range of services that benefit the region as a whole, but whose resident populations bear most of the cost. Parts of the electorate become frustrated by paying for services enjoyed by others who do not pay the same level of tax. Alternatively, in metro-regions like the Paris Ile-de-France, where deprived populations live in communes around the periphery but spend their working lives in Paris, the local communities in which they live bear the costs of providing support services that try to compensate them for the low earnings that they receive in the city.

In addition to these negative externalities, the impact of *spatial planning and the organisation of public-service provision* on agglomeration effects has often been perverse. Many negative externalities relate to the interaction between economic activities and social patterns in space; density and movement are key parameters for the organisation of cities. For most of the 20th century, planning resulted in the functional separation of land uses. Zoning set aside land for residential, commercial, industrial and civic uses; urban services such as education, water, transportation and health were organised into separate bureaucracies which worked in parallel, managed by experts whose professional training reinforced a sectoral approach. This form of development was consistent with an economy of heavy, labour-intensive manufacturing, linked by relatively fixed connections by rail and sea. In the Fordist era, when the reallocation of labour meant that cities grew rapidly through in-migration (frequently from rural areas, but also from stagnating urban regions), uniform housing and in general a similar treatment of spatial structures and commercial and retail facilities meant that newcomers could more easily find their place in the city. Equally, a zoned pattern of land uses

corresponded to a pattern of day and night use of space, both in residential and economically active areas. However, aside from considerations of historic preservation, this approach to city-building was not adapted to the task of identifying and enhancing specific local needs and assets such as open and recreational space, access to rivers, neighbourhoods and districts distinguished by their architectural and social features. The shortcomings of the zoned industrial city became glaringly evident as factories and rail yards closed and many urban sites became abandoned. Social problems became concentrated in housing estates that were now remote from any sources of employment, while pressures arose to add new commercial and retail properties in established urban centres zoned for economic activities.

2.2.3. Metro areas versus national growth?

There is an important and continuing debate over the impact of metro-regions on overall development within a national economy. This debate has two aspects. The first concerns whether the normally observed association between urbanisation and economic growth peaks at a certain point of urban agglomeration. The second concerns the impact of the growth of metro-regions on development in other parts of a country. Existing knowledge does not permit clear answers to this question, partly because, as has already been stressed, metro-regions are not a unitary phenomenon: cities have become agglomerations for a number of different reasons. Also, as will be discussed extensively in this report, there are considerable differences in the ways that both city and national authorities have dealt with both metro-regions and their fiscal and other relationships to the rest of a country.

With respect to the relationship between urbanisation and growth, there is evidence in the academic literature of particular gains from what some authors accept as being “oversized” cities. Bertinelli and Black (2004), for example, use an econometric model to demonstrate such gains. They consider how the trade-off between optimal and equilibrium city size behaves when introducing dynamic human capital externalities in addition to classical congestion externalities. They assume that productivity depends on human capital, that this is solely accumulated in cities (Jacobs, 1985) such that urbanisation is the engine of growth. At low levels of technology, a development trap may occur, with levels of human capital and urbanisation being insufficient for growth to occur; while in equilibrium, urbanisation rates are too high due to the existence of a congestion externality. However, as urbanisation encourages human capital accumulation, there are dynamic benefits of static over-urbanisation. We can further stress here the arguments of Jacobs (1969) on technological advancement through inter-sectoral learning. This leads the authors to conclude that: “*myopic policies designed to reduce the degree of over-urbanisation by limiting urbanisation will tend to have an*

adverse impact on economic growth, lowering an economy's steady-state level of technology and potentially leaving the economy stuck in a development trap. This suggests that policies designed to remedy potential over-urbanization may have adverse dynamic effects. In addition, spatial redistribution, rather than a curtailment of an economy's urban population may remedy the costs of over-urbanisation without these negative dynamic effects." However, they acknowledge that "a full understanding of this requires in-depth knowledge of the costs of infrastructure investments required for urban population decentralisation". Much also depends on the initial assumptions, and on the range of negative externalities that are taken into account.

The validity of the assumption that human capital is accumulated solely in cities is challenged by Polèse (2005). He argues that it is difficult to rigorously test the relationship between agglomeration and economic growth, part of the problem stemming from the difficulty of distinguishing factors that allow cities to capture a greater share of national economic growth from those that allow them to add to it. In a study of five Latin American cities, Freire and Polèse (2003) addressed the same issue, with particular reference to the question of why cities in developing nations do not create more wealth. They argue that positive local agglomeration effects can be realised only when there is a suitable national institutional and public policy environment: the rule of law, property rights, appropriate macroeconomic policies, appropriate public sector involvement. The local impact of this environment concerns those services which have to be consumed (though not necessarily provided) locally. For example, urban crime, poor traffic management, and poor street and road conditions reduce the potential for interaction and business meetings, and consequently for knowledge spillovers, with possible long-range negative effects on the rate of innovation. The same factors also affect labour recruitment, particularly of women, and staff punctuality. Inferior public services proportionally hit small firms the hardest, with a predictable impact on potential start-up businesses and entrepreneurship. Latin American data do not necessarily have direct implications for OECD countries, though at least some of the phenomena discussed are recognisably general: some of the tensions of economic success of metro-regions can be seen even in the cases of the largely well ordered Greater Helsinki Region and of the Mälars region around Stockholm (Box 2.1).

As to the question of the effect of growth in metro-regions on other parts of a country, it is frequently claimed that the wealth generated by successful regions can be of general benefit. Where metro-regions are what were termed in chapter one polycentric, the interests of both large and small cities within the metro-region may be more easily reconciled. As land costs rise in the major urban centre(s), smaller nodes within the region may grow, and may have more scope for so doing before the congestion and social segregation

Box 2.1. **Growth versus equity in successful metro areas: the examples of Helsinki and Stockholm**

After some very difficult years in the early 1990s, **Helsinki** and its surrounding region emerged as an internationally competitive economy that had seemingly grafted the requisites of the “new economy” on to the bedrock principles of the Nordic welfare state. The experience corroborates broader empirical evidence suggesting that a social commitment to equity need not disadvantage the economic performance of countries. At the same time, incipient trends observed in Finland and the Greater Helsinki Region (GHR) suggest that this commitment has become more difficult to implement in the current environment of economic development. Recent widening of regional disparities within the country, greater spatial differentiation within municipalities, and an increase in inequality of the size distribution of personal income – although modest in all cases – challenge the ability of the state, regional and local economy to meet its equity mandate while sustaining economic growth. Along several dimensions, development of the GHR is best described as transitional, compelling a reassessment of policies able to pursue competitiveness and equity as multiple objectives. The success of the ICT sector is a bellwether of a broader set of changes to the patterns of urban development. At the same time, the growth of Helsinki means that immigrants dependent on social support and other allowances are tending to be concentrated, with attendant social problems, in the city, although they are spread throughout its neighbourhoods, without any distinctive ethnic area or subculture emerging. Meanwhile, some other parts of the region are becoming progressively wealthier and more entrenched enclaves for the affluent, especially highly-paid workers in the IT economy. Dynamics of the “secession of the rich” can develop quite quickly and lead to very negative unintended effects in terms of sustainable development, social integration and economic development. In this light, attempts at regional co-operation would meet with mixed success, with issues of tax equity, social housing, cultural life, and economic development as nagging sources of political friction.

In **Stockholm**, the low level of housing investment, exacerbated by housing market distortions, has contributed to the shortages that drive high housing costs. Changes in the housing finance environment worsened dramatically during the economic crisis of the 1990s. The tax reform (1990-91) and the modifications to policy over the last decade have led to higher housing prices and discouraged housing investment, which is at a very low level in comparison with some other OECD countries. Municipalities, which are responsible for the planning and overall implementation of housing construction, have been unable to promote the investments necessary to

Box 2.1. Growth versus equity in successful metro areas: the examples of Helsinki and Stockholm (cont.)

meet Stockholm's in-migration. Cuts in allowances for individuals have also contributed to the large share of household spending on housing. High rents in the central parts of the Stockholm Mälars region and housing market distortions contribute to segregation and spatial mismatches within the region. The intent of the rent regulations is to ensure affordable housing; however in general this tool results in considerable efficiency losses. Most municipalities own non-profit housing companies that allocate apartments to renters regardless of income, origin or family structure. In other words, there is no "social housing" in common usage. High housing prices have been particularly prohibitive for low income people, particularly in the County of Stockholm, where the price level of housing increased dramatically after the downturn economy in the early 1990s.

Source: OECD (2006d), *OECD Territorial Reviews: Stockholm, Sweden*, OECD publications, Paris, France and OECD (2003a), *OECD Territorial Reviews: Helsinki, Finland*, OECD publications, Paris, France.

effects characteristic of the larger centres begin to operate. The smaller cities gain from the growth, while the larger ones benefit from the reduction of pressure. Within more monopolar regions (such as London and Paris) it is possible to attempt a similar development of minor growth poles, but more determined planning is required, as transport structures and patterns of built space continue to reinforce concentration on the centre.

The strength of large metropolitan areas may also generate many positive spillovers into other regions through fiscal revenues, foreign exchange earnings and exports, which pay for infrastructures, services and wider transfer payments across the entire country. Many of their assets, such as headquarters of key corporations, infrastructure (e.g., airport) and information services, actually serve firms and consumers located elsewhere in the country and (up to the point where congestion costs and high land prices outweigh the effect) at cheaper costs thanks to agglomeration economies. Subject to certain negative consequences considered above, the dynamic region offers opportunities for mobility to young people from other regions who have the opportunity of moving to take advantage of the job opportunities there: in no sense are the gains that flow from dynamic regions kept for existing residents alone. Metro-regions tend to generate a large number of low-productivity service occupations in both public and private sectors that offer job opportunities to workers with low education levels. This occurs because of the particularly high needs for occupations concerned with

maintaining the infrastructure of concentrated urban spaces – for example, in cleaning, transport, security, and janitorial activities. At a time when mass manufacturing, which used to provide employment for large numbers of such people, is declining in its capacity to generate employment, this is a useful employment gain.

On the other hand, possible negative consequences of the growth of metro-regions can be seen by their brain and capital drain effect on other regions. By losing their educated and skilled population as well as capital resources, these less populous regions then face decline. The ICT sector and the other dynamic sectors of the new economy have demonstrated a strong urban bias in location; economies of agglomeration exploiting the diverse collection of services and economies of localisation exploiting concentrated specialisation are thought to be dependent on a scale of economic activity available in medium to large cities. From Portugal, Ireland and Finland to France and Britain, the major city has faced continuous growth much to the irritation of the rest of the country. Inhabitants outside the favoured zones often perceive these developments with a great lack of trust, fearing that any transfer of resources to the flourishing metro-region will jeopardise their own resources or marginalise them.

Given that high population concentrations often entail high congestion and other costs, does a policy of explicitly discouraging metro-regions to the advantage of others have a positive outcome? Experiences of containment policies in OECD countries (such as the one conducted in Paris in the 1960s, in Tokyo from 1959-2002, in London from 1965-1979 and still currently implemented in Seoul since the 1970s) have provided mixed outcomes (Box 2.2). There is little reliable data showing whether constraints on the growth of the major region actually displaced economic activities to other domestic regions, thus compensating for the loss in the major regions with higher growth elsewhere in the country. In addition, there is an increasing concern that such policies and others might hold back international competitiveness of the major city in the context of an increasingly globalised economy. For example, the Korean government has pushed “balanced national development” as a priority, planning to build regional innovative clusters in regions other than Seoul, and has also designed plans to build a new administrative capital and to decentralise most of administrative functions out of Seoul. Meanwhile, a study shows that knowledge-based industries in Korea and especially in the capital region will experience a significant shortage of land over the next five years (Kim, Choo and Nahm quoted in OECD, 2005f). If these industries cannot find suitable sites in the capital region, it is unclear whether they will relocate to other Korean regions or go for more attractive regions in competing Asian countries. Similarly, the Paris metropolitan area was long seen as diverting growth from other regions

Box 2.2. Monitoring the growth of capital regions in OECD countries

France has attempted to achieve “controlled growth” in the capital region around **Paris**, which expanded so rapidly compared with the rest of the country that scholars worried early about “Paris and the French desert” (title of a 1947 publication by French geographer Jean-François Gravier). Since 1955, both public and private firms seeking to expand within Paris are required to apply for an administrative authorisation. Regulations on offices were considerably loosened in 1985 but restored for larger offices in 1990. The government also started to levy taxes (*redevance*) on new offices locating in the Ile-de-France region to discourage new firm creation after the 2 August 1960 law. The scheme was toned down in 1982 when it was restricted to specific zones with a regressive pricing mechanism. Evaluations show that industrial employment in the capital region decreased extensively but mainly due to sectoral shifts rather than to the efficiency of the government’s deterrents (DATAR, 1999).

In Japan, the Industrial Relocation Promotion Law (1972) introduced direct subsidies from the MITI and long-term loans for businesses willing to relocate to designated areas. The results of this policy are mixed. On the one hand, the volume of industrial output from **Tokyo** and **Osaka** declined from 18% to 15% between 1985 and 1992. On the other hand, there was less success in fostering dynamism and creative capabilities in Japanese localities outside of the Tokyo-Nagoya-Osaka agglomeration. Although many prestigious technology-oriented buildings were constructed, the lack of venture capital and of other soft infrastructure made it hard for entrepreneurs to take the risk of launching start-ups (OECD, 2005d).

In the Netherlands, the **Randstad** is above all a spatial planning concept that was born shortly after the Second World War and refers to the position of a belt of cities, in particular four large cities (Amsterdam, Rotterdam, The Hague and Utrecht) encircling a green open area named the *Green Heart* in the western part of the Netherlands. National spatial development policies have in recent decades switched back and forth between promoting and discouraging the development of the Randstad into a metropolitan region. Repeatedly, fears of the Randstad growing together into one “amorphous” metropolis have led to policy initiatives to limit expansion of the large cities and urban sprawl around them. This approach had two main consequences until the 1990s: within the Randstad, planning policies focused on the preservation of the green heart, seen as a key asset for the region, and the restriction in housing policy; and policies were focused on dispersing growth out of the Randstad towards more peripheral regions of the North and the East of the Netherlands.

Box 2.2. **Monitoring the growth of capital regions in OECD countries** (cont.)

In the United Kingdom, both deterrents and incentives were used to limit London's high concentration. From 1965 to 1979, the Greater London Council required firms to apply for office development permits (ODPs) before establishing new offices in the **London** area. A Location of Offices Bureau was set up and helped companies move away from the capital city. However, evidence of slowing expansion in London remained quite mixed. For example, the rate of office floorspace development increased from 14.6% in the decade before ODPs to 20.4% in the decade after.

In Korea, since at least the 1964 enactment of “Special Measures for the Restriction of Population Growth in **Seoul**”, there have been efforts to control the growth of Seoul and the larger capital region in order to ensure balanced national development. These efforts include relocation of government offices outside of Seoul, the relocation of university branches outside Seoul and financial incentives to relocate firms and regulations to curb the expansion of industrial establishments and academic institution in Seoul (OECD, 2005f). The nature of the policies has gone through numerous changes over the years, as various measures proved ineffective and encountered criticism that curbing the growth of Seoul was undermining Korea's competitiveness on the international stage. Even so, there are many indirect, economic disincentives against locating in Seoul. For example, the Capital Region Readjustment Planning Act (1982) divides the area into three main categories: congestion restraint zones, growth management zones and nature conservation zones. According to the category, the central government prohibits or controls the construction of new factories and buildings, levies over-concentration taxes, and bans or administers the creation of new universities (except for smaller and vocational colleges). In addition, the registration tax is five times higher in Seoul than in the rest of the country because of the Capital Region Planning Law (OECD, 2005f).

and was largely excluded from regional development policy. However, recently the region lost some rank against its EU major competitors for its innovation capacity and competitiveness, partly explained by the decision to relocate some public research centres outside the region (OECD, 2006a).

2.2.4. Summary: dilemma I

Resolution of this dilemma involves strategies of assisting metro-regions to maximise their economic and environmental possibilities, but without artificially promoting the growth of heavy population concentrations or

inhibiting the development of other growth models in other kinds of region. In rapidly changing market economies it is not good public policy to “put all one’s eggs in one basket”. It is never certain where future springs of innovation will develop until these emerge through market forces, and it is as important to avoid becoming over-dependent on particular urban forms as it is on particular industries. This formulation does not prevent stark specific choices from emerging: Should major new building be permitted, expanding the size of a particular city, or should measures be taken to encourage development in an area of declining population? Should priority in building transport infrastructures go towards easing congestion within a metropolitan concentration, or to reducing the economic isolation of a medium-sized city? (It must here be remembered that the effect of improving transport infrastructure is often to encourage a further growth of activities, journeys and population in the area concerned until congestion returns to its former unacceptable level.)

Evidence from the OECD *metropolitan reviews* does not produce easy answers to such choices: the fact that some metro-regions have excellent growth records does not mean that creating large concentrations of people is enough to stimulate such a record. On the other hand, the continued development and world city status or goals of such cities do not necessarily contradict national plans for balanced economic development. Also, given that there is uncertainty over what kinds of new economic initiatives will be successful, metro-regions have the advantage of being areas with considerable internal diversity and therefore stand a better chance than smaller, more specialised or less pluralistic areas, of becoming the locations for successful innovation. At the same time, there are examples of successful regions outside metro-regions: policies towards the latter need to be balanced by different ones targeted at different sectors and with different expectations for other parts of a country.

It is not possible for national or local authorities to address this dilemma by allowing market forces alone to determine relations between metro-regions and other parts of a country. A pure *laissez faire* approach would involve taking no public-policy measures to address congestion or to co-ordinate land-use policy within a metro-region, allowing the costs of inconvenience to mount until the area becomes uneconomic and firms move to other zones, leaving the metro-region to shrink in size. But that process would be prolonged and painful, and in the meantime potential synergies from the existence of the metro-region would be lost. On the other hand, action to support the infrastructure of a metro-region and ensure its development will mean ensuring that it continues to attract labour, firms and capital away from other regions. To pursue this path requires confidence that the metro-region will deliver the expectations held of it.

Reconciling national and dominant-region interests in a positive-sum game requires a new strategy that goes beyond the typical “centre versus periphery” dichotomy. Under the paradigm shift in regional development policies (OECD, 2005a), the most effective measures do not consist in distributing direct subsidies to lagging regions while ignoring the best performing regions, but in capturing differentiated regional competitive advantages. The condition is that all of a country's regions strengthen their own functional specialisation enough to develop cross-regional complementarities. Building co-operative exchange networks between the major cities and other regions could generate synergy effects (*e.g.*, programmes for twinning universities and other regions, location in two places of different aspects of major technology projects). Meanwhile, metro areas need a comprehensive strategy to continue to contribute to national growth, tackle negative externalities of excessive urbanisation and deliver positive spillovers to other regions.

2.3. Dilemma II: public strategic vision in a market context?

To view the economic activities of a metro-region as a whole in this way, to seek to encourage the location of particular activities within the region, to provide an environment in which both they and the population in general will thrive implies that there is a strategic vision at the level of the metro-region. This will need to address such issues as whether and how existing or new specialised clusters are to be encouraged; the role that will be played by higher education and research as well as more basic and vocational education; and, further related to education and research, the strategy for improving the region's innovation capacity. Public authorities are central to the generation of such visions; but can they do this without attempting direct substantive economic planning of a kind which cannot work in a dynamic, changing economy?

2.3.1. Why a strategic vision?

Strategic visions are highly important, but it is necessary to distinguish this process from economic planning in the older sense. The argument that local public authorities, together with other significant economic actors, need to develop a strategic vision for a metro-region seems to conflict with the importance of market forces in determining economies, and to hark back to attempts at planning economies. It is important that authorities understand that it is not possible to make administrative decisions that particular economic activities shall flourish in a particular region. The firms that are attracted to the region and sector need to have the right entrepreneurial and managerial qualities if they are to succeed, even in the best of environments; and some niches may already be over-full. This is not to say that public policy cannot play an active part in changing a region's comparative advantages, but

it needs to do this while being well informed about possibilities and potentialities. Similarly, central to appreciating the scope for regional strategic vision within free and open markets is a shift from the provision of subsidies or restraints in trade to indirect support for the business environment and the provision of infrastructure. It is important that public authorities take note of what activities flourish already in their region, and what seem, on the basis of evidence elsewhere, to be new activities that should be able to prosper. In this process widespread participation by a range of stakeholders will help ensure both an extensive contribution of ideas and perspectives, and subsequent commitment to the vision achieved. Strategic visions must also be capable of changing and responding to new challenges. This is more easily achieved if it is well understood from the outset that the vision is a permanently developing process and not something established at one point in time.

There will however continue to be risks in developing policies based on a strategic vision. Policies that provide resources that may be used by entrepreneurs may be difficult to relate directly to the performance targets that are a fundamental part of contemporary public management, for two reasons. First, some activities may not be linked directly to firms' actions. Second, even where a link can be made, by no means all entrepreneurial activities will be successful. The second presents particular problems for public administrations who are not accustomed to accepting failure. Older policies of support, such as protecting, subsidising, guiding special facilities to well established local industries, rarely encountered this prospect, until the final years of collapse of the industries concerned. The reaction against that experience led to a period of withdrawal from any intervention by public authorities at all levels, who came to believe that they should have no role at all in supporting economic activity. Neither this nor the old approach are appropriate for a period in which change and uncertainty are endemic, but where regional strategic vision and detailed enabling policies can clearly have a role in promoting the competitiveness of firms within the region. New means need to be found helping authorities to cope with risk and possible occasional failure, while still seeking to appraise the quality and success of their actions.

A valuable means of spreading these risks is the development of a diversity of specialised clusters, based on a large number of firms. The risks inherent in radical innovation mean that there is always insecurity in areas with a large number of such activities; an advantage of clusters (discussed below) is that they assist in the absorption of this insecurity and therefore both facilitate risk-taking and reduce its negative consequences. As the high-tech regions in the United States in particular demonstrate, where there is a large number of firms, research institutes and other institutions connected with a sector and its supply and knowledge chains within a region, risks are

cushioned. If a firm collapses, its high-calibre employees are likely to be able to find alternative employment that uses their skills without leaving the region; the capital and plant invested in the firm remain at the disposal of more successful enterprises, also within the region.

A first step to formulating a vision is to build political commitment and consensus behind the notion of metropolitan co-operation. This is particularly difficult to achieve where, as is normally the case, the metro-region is not a level of formal political competence. This is an issue considered further below in connection with governance arrangements. Formulating the vision may involve establishing a clear initial statement of the shared interests of each entity and of the commitment to work towards a common vision of the role of the metro-region. Before the development of a strategy and of mechanisms to implement it, the nature of the metro-region “project” needs to be clearly defined with the expression of why the different levels of formal government depend on each other. This regional vision is essentially a statement of common interest and a commitment to co-operate towards common, agreed objectives. The vision needs to understand the different identities that it encompasses, promoting complementarities and interdependencies, but also recognising differences and distinctive characteristics. To the extent that it is a political charter, this statement should be accepted by the heads of government of the different component authorities, but elaboration of the vision on which it rests could be a more consultative process involving different public and private stakeholders.

The second main component of a strategic vision is its policy content. In particular, it needs to encompass how the metro-region will establish a liveable environment with strong infrastructure and avoidance of the creation of areas of social segregation and inclusion, but it will also need to say something about the kinds of economic activities that the infrastructure and other public policies intend to support and encourage. Formulations of this kind need to combine vision and ambition with realism, and to include sober assessments of what such policies are likely to be able to achieve. It is very likely that there will be attempts to associate the region – or to take advantage of existing associations – with specific sectors. Some such specialisations are based on small numbers of large firms, though the experience of the Fordist period of manufacturing embodied salutary lessons of the risks of over-dependence. This concerned not just over-dependence on a sector, but on large organisations that often left areas with skill specialisations that excluded entrepreneurship and adaptability. In the light of this experience, it is not surprising that many local and regional development plans now include roles for SMEs and other forms of enterprise that will strengthen local capacity. This has often implied a concentration on specialised clusters, as these enable SMEs to take advantage of innovation. As noted above, metro-

regions have the further advantage of being able to contain a number of specialisations, avoiding the form of dependency that comes from the single-cluster development often associated with smaller towns and industrial districts.

The experience of the most successful metro-regions suggests that a number of key themes need to be addressed by strategic visions. For reasons already noted above, the encouragement of specialised clusters and their distinctive infrastructural and networking needs is one of these. Clusters do not involve only firms, but a number of other supporting institutions, prominent among which are local higher education and research institutes that interact regularly with creative enterprises, exchanging both ideas and personnel with them. The examples on which these conclusions are based come mainly from highly publicised high-tech sectors; but not every metro-region can specialise in what is a relatively narrow range of activities, within which success may be difficult to achieve. It is essential also to address viable strategic visions that do not depend on high-tech activities.

2.3.2. Cluster development policies

Characteristics and advantages of industry clusters

Industry clusters are tied into a spatial economic context and contribute to building metropolitan competitiveness. They can be defined as geographical concentrations of groups of industries within which firms and other actors in the spatial economic systems are formally or informally interlinked through their activities. An industry cluster is both functional (economic) and spatial. Consistent with their general concept, industry clusters in a metropolitan context show several major characteristics:

- They specialise in certain kinds of economic activities. Businesses in the cluster can be linked through a wide range of channels, ranging from a supply chain, same knowledge base (human resources, research institutions etc.) to common policy environments.
- They have a geographical scope, but the size of this depends on how closely firms or industries interact with each other and the overall size of the cluster. Often, spatial industry clusters spill over beyond jurisdictional boundaries and thereby are functionally rather than politically defined. In a metropolitan context, industry clusters often exist beyond smaller jurisdictional units (counties, etc.) and sometimes even go beyond a metropolitan region to a certain extent. Consistent with a functional metropolitan region, an industry cluster also spatially expands over time.
- Despite the focus on certain industry groups, industry clusters are tied into a much larger interlinked economic system where formal and informal interactions among businesses and other local actors are considered.

Learning, knowledge creation, and technology innovation and diffusion are particularly observed in this process. Overall, a combination of these characteristics leads to economic synergies and contributes to metropolitan competitiveness.

Different kinds of industry clusters function differently in competitiveness building, with traded clusters engaged in export activities showing distinct advantages. Industry clusters are not all the same kind. They may differ in the products or services they produce or deliver, stages of development (young, mature, present or potential) and other dimensions involved. Due to the various differences, the effectiveness of industry clusters in building regional competitiveness therefore varies across clusters and regions. This may at least partly explain the conflicting outcomes in cluster practices. Porter (2002) identifies three types of clusters based on their roles of serving local economy: traded clusters, local service clusters and resource clusters. Traded clusters refer to export-oriented clusters, often associated with higher productivity and higher wages. Local service clusters and resource dependent clusters are location dependent even though the latter may serve national or global resource markets. Although local services clusters are more evenly distributed within metropolitan regions to access a wider range of customers, their development is strongly coupled with the growth and expansion of traded clusters (manufacturing or services). All these clusters are important components of metropolitan economies, but traded clusters are what are really fundamental to building metropolitan competitiveness. A number of cluster cases studies show that traded clusters show more value added (measured by wage levels) than the average for the region in which they were located (Table 2.1). These clusters tend to concentrate better local

Table 2.1. **Wage levels of US metropolitan traded clusters (2002)**

Metropolitan regions	Average wage of traded clusters	Regional average wage	Difference (%)
Boston-Cambridge-Quincy, MA-NH	62 350	45 709	36.4
San Francisco-Oakland-Fremont, CA	68 418	49 720	37.6
Seattle-Tacoma-Bellevue, WA	61 391	43 193	42.1
New York-Northern New Jersey-Long Island, NY-NJ-PA	73 838	50 172	47.2
Denver-Aurora, CO	51 988	39 322	32.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	59 363	44 152	34.5
Dallas-Fort Worth-Arlington, TX	50 518	39 359	28.4
San Diego-Carlsbad-San Marcos, CA	50 147	37 412	34.0
Los Angeles-Long Beach-Santa Ana, CA	48 169	38 732	24.4
Houston-Baytown-Sugar Land, TX	51 033	40 435	26.2

Source: Porter, M. (2000b), "Location, Competition, and Economic Development: Local Clusters in a Global Economy", *Economic Development Quarterly*, Vol. 14, No. 1, pp. 15-34.

resources (knowledge, skills and capital, etc.) with competitive advantages. Set in a well-balanced metropolitan economic context, policy practitioners should therefore turn to traded clusters for building regional competitiveness.

The main advantages of clusters are that they present both various economies of scale as well as the production of tacit and unformalised knowledge that flows among those engaged in related activities and in frequent work and social contact with one another. Cases are reported from both traditional artisan production of, for example, fashion goods, to the most modern high-tech industries and services. Innovation seems inherent to clustered production. Also important here is the idea of untraded interdependencies (Storper, 1997) in labour markets, regional conventions, norms and values, public or semi-public institutions, etc.) that foster an environment conducive to trust, cooperation and innovation, often synonymous with social capital. Within dynamic high technology clusters, levels of personal exchanges between firms appear to be higher than in non-clustered locations. This type of cross-pollination of ideas and innovation is put forward as one of the main drivers of the success of the Silicon Valley model (Saxenian, 1994), and also the successful Stockholm ICT cluster, which exhibits higher rates of inter-firm labour mobility than the rest of the labour market (Power and Lundmark, 2004). In addition, clusters can combine flexibility and stability in the labour market, when key workers can be confident that, in the event of corporate collapse or redundancy, they can find new firms in which they can exercise their skills without major residential upheaval.

Knowledge of the advantages of clusters is however often dependent on case studies rather than large-scale statistical analysis. Other studies have questioned the validity of the cluster hypothesis, asserting that problems of definition and measurement make empirical evaluation of the relative performance of clusters and, in particular, the origins of any difference with non-clustered industries statistically dubious (Martin and Sunley, 2003). What is certain is that much of the evidence to support the view that clusters are more productive is case specific. Large scale empirical reviews are extremely rare, with the review of the Bank of Italy standing out as the most extensive research effort. The problem from an international perspective is that Italy already provides the best evidence of external economies derived from clustering, though there is also considerable evidence from California and other parts of the United States specialising in information technology and biopharmaceuticals in particular.

Clusters within metro-regions present specific challenges and opportunities because of the large size of these regions. Cluster characteristics and advantages develop most easily and autonomously in towns and cities with dominant specialities, and a more conscious strategy may be needed to

identify clusters and the locations within a metro-region where they can be cultivated. The concept of locational advantage that has been used by some theorists to focus attention on the crucial role of geographical cumulative causation (Myrdal, 1957) and positive feed-backs (Kaldor, 1967 and Krugman, 1992), as well as the embeddedness of investment in generating competitive advantages (Dunning, 1992) seem to imply close geographical proximity of a kind that cannot be found across a metro-region except in small district-based industries. However, especially within high-tech sectors, there is also strong evidence of more widely spread networks that stretch along transport corridors or are scattered across a region. Examples of the latter are found particularly in the biosciences in the United Kingdom and United States (Cooke, 2004; Swann, Prevezer and Stout, 1998) and more recently in the Munich-Ingolstadt metropolitan region (Jong Kon Chin, 2006). The exchanges among these scientists, working in both firms and universities, are organised more formally than in a classic, concentrated industrial district, and can therefore be arranged across a wider geographical area.

Popularity and suggested principles of cluster development policies

Policies for the encouragement of clusters have proliferated over the past decade, with manifestations ranging from policies to encourage low-resourced, small-group business networks without a particular sectoral focus to complex, large-scale programmes of co-ordinated measures that target a specific, geographically cohesive industry. There have been many examples, with varying success, of public policy targeted at the cultivation of clusters. Table 2.2 lists some examples implemented in different types of metropolitan regions and in some smaller urban areas. These cluster strategies vary in terms of their prioritised competitive industry, focus and policy tools. The table suggests that an industry approach has been widely accepted as an effective tool of local (and in the UK cases national) governments' targeting competitive industry groups as a way of building and strengthening metropolitan competitiveness. Specific cluster policies and focuses however vary. For example, given the differences (strengths and weaknesses) in their metropolitan clusters, the TAMA association in Tokyo stresses the importance of fostering SME growth and building university-firm linkages whereas the Montreal metropolitan region takes a more comprehensive approach, ranging from identifying industry clusters, developing action plans and preparing a regional innovation strategy (Box 2.3).

Cluster policies are most likely to be effective when they constitute a holistic approach, bringing together separate policy instruments. Different from traditional sectoral policies or regional (or metropolitan) policies which focus strongly on building physical infrastructure, these policies pay particular attention to building linkages between local actors and more

Table 2.2. **Examples of industry cluster policies in metropolitan regions**

Metropolitan region	Starting year	Brand name of the cluster strategies	Targeted clusters
Established regions			
Boston	2004	2004 Comprehensive Economic Development Strategy by Boston Metropolitan Planning Council	<i>Knowledge creation, IT, financial services, health care, traditional manufacturing</i>
Montreal	2003	Charting our international future: building a competitive, attractive, independent and responsible community (overall metropolitan strategy)	<i>Competitive clusters (aerospace, life sciences, information technologies, and textiles and clothing); visibility clusters (culture, tourism, and services); emerging technology clusters (nanotechnologies, advanced materials, and environmental technologies); and manufacturing clusters (energy, bio-food, petrochemicals and plastics, and paper and wood products).</i>
Munich	Various	Loosely structured cluster policy programs, including Bio ^M (1997) and Software-Offensive Bavaria (1998)	<i>Mechanical engineering/automotive, ICT, finance/insurance, medical, biotechnology, and aerospace</i>
Capital cities			
Ottawa	2002	Innovation Ottawa	<i>Tourism, telecommunications, microelectronics, professional services, life sciences, software and communications and photonics</i>
Seoul	2002	Seoul Digital Media City	<i>Digital media industry and related industries such as software and IT-related service industries, IT manufacturers, R&D centres dealing with media and entertainment technology, as well as industries distributing and consuming digital contents.</i>
Stockholm	Various	Various, including Stockholm Bioregion (2003) and Kista Science Park (2000).	<i>Biotechnology (life science), ICT and environmental technology</i>
Tokyo	2002	Regional Industry Revitalization Project (for Northern Tokyo metropolitan area), Fostering Bioventures, and IT venture forum by Meti-Kanto	<i>Transportation and electric machine, biotechnology, and IT</i>
Newer technology centres			
San Diego	2002	Community and Economic Development Strategy (FY 2002-2004)	<i>Telecommunications, biomedical/biosciences, software, electronics manufacturing, financial and business services, and defense and space manufacturing</i>
Phoenix	2002	Turning Point: New Choices for the Future by Greater Phoenix Economic Council (GPEC)	<i>Aerospace and aviation, high technology, bioindustry, software, and advanced financial and business services</i>
Inner cities			
Milwaukee, Minnesota, US	2003	The Initiative for a Competitive Milwaukee (ICM)	<i>Manufacturing, business process service centres, construction and development, and health services</i>

Table 2.2. **Examples of industry cluster policies in metropolitan regions (cont.)**

Metropolitan region	Starting year	Brand name of the cluster strategies	Targeted clusters
Louisville, Kentucky, US	2002	The West Louisville Competitive Assessment and Strategy Project ("The Strategy Project")	<i>Automotive cluster, transportation and logistics cluster, and life sciences (biomedical research and health care)</i>
Newark, New Jersey, US	2004	Opportunity Newark: Jobs and Community Development for the 21st century (Opportunity Newark)	<i>Education and knowledge creation, entertainment, arts and retail, health services transportation, logistics and light assembly</i>
Reading, Pennsylvania, US	2005	Initiative for a Competitive Greater Reading (ICGR)	<i>Entertainment, hospitality and tourism; food processing; and professional and shared services</i>
United Kingdom	2001	City Growth Strategies (CGS) Pilot areas include St. Helens, Nottingham, Plymouth and four areas of London	<i>Various clusters identified, for example, prioritised clusters in Plymouth includes advanced engineering, business services, creative industries, marine industries, medical and healthcare, tourism and Leisure.</i>

Sources: City of Ottawa (2002), Innovation Ottawa: a Strategy for Sustaining Economic Generators, available at www.ocri.ca/about/assets/export_plan.pdf; City of San Diego (2002), Community and Economic Development Strategy (FY 2002-2004), available at www.sandiego.gov/economic_development/contacts/pdf/cedstrategy.pdf; Metropolitan Community of Montreal (2003), "Charting Our International Future: Building a Competitive, Attractive, Independent and Responsible Community", available at www.cmm.qc.ca/vision2025/vision2025_enonce_en.pdf; Greater Phoenix Economic Council (2002), Turning Point: New Choices for the Future, available at www.greaterphoenix.net/work/files/Pocketssummary.pdf; OECD (2006d), OECD Territorial Reviews: Stockholm, Sweden, OECD publications, Paris, France; OECD (2005f), OECD Territorial Reviews: Seoul, Korea, OECD publications, Paris, France; Inoue, H. (2003), "Activating Industrial Clusters – On The Spot Experience", available at www.rieti.go.jp/users/cluster_seminar/pdf/005_p.pdf; Newark Alliance (2004), Opportunity Newark: Jobs and Community Development for the 21st Century, available at www.opportunitynewark.com/default.aspx; as well as other local development strategy reports including from Munich and Boston.

broadly developing social capital. Effective industry cluster policies should integrate different aspects of regional development into a holistic policy framework: e.g., technology innovation, regional productivity advantages, and growing *versus* declining sector balancing (Bergman and Feser, 2002). The cluster approach requires policy consistency across local actors. In particular, facilitating inter-firm linkages and linkages between private sectors and research institutions involves many actors, such as different industry sectors, higher education and research institutes and development agencies. Policy co-ordination and consistency are necessary in order to make the approach effective. This entails new partnerships between government, business and communities with business and communities playing a more direct role in the formulation of strategy and economic development process (Stimson, Stough and Roberts, 2002). For example, although not strictly structured, cluster development in Munich pays attention to the consistency and complementarities of cluster initiatives from the private sector, the science world, the city-government and the government of Bavaria. Munich's IT cluster shows collaboration between Munich and Bavaria through the software-offensive initiative driven by the Bavarian Land government. In summary, although there has been some questioning of the degree to which cluster policies are

Box 2.3. Examples of different metropolitan cluster approaches

TAMA (Technology Advanced Metropolitan Area) Association in Tokyo. TAMA is an association, founded with the encouragement of the Ministry of Economy, Trade and Industry (METI) (particularly through the Kanto Regional Bureau). The association focuses on the revitalisation and development of industries located in the western parts of the Tokyo metropolis, creating new technologies, products and businesses. Between 1996 and 1998, the TAMA association was created to link almost 200 enterprises and a large number of other actors in a range of joint activities designed to enable these small or medium sized enterprises to access new technology, market information, product development facilities and export information, among other things. In establishing TAMA, its industrial and governmental founders, considering the local circumstances and potentials, referred to models elsewhere, including the Greater Washington Initiative (a public-private regional development organisation in Washington, DC, and parts of Virginia and Maryland). The TAMA region, which stretches over three prefectures and 74 municipalities, contains more than 300 000 small businesses and about 40 universities. Of these, about 300 area companies and 34 universities are members of the TAMA association. The association promotes industry interaction and seeks to strengthen traditionally poor industry-university linkages through exchange and joint R&D projects, with the broader goal of creating synergies that will foster new technological development and commercialisation. TAMA has established a Technology Licensing Office to assist in patenting, licensing, and R&D commercialisation. The TAMA region has significant strengths in mechatronics, instruments, and control systems. TAMA founders report that they have been successful in raising the concerns of companies in these sectors to policymakers, in catalysing academic-industry links (important because many of the region's universities are small and not experienced in technology transfer), and in creating a unifying hub in an otherwise fragmented region.

Cluster development strategy in the Montreal metropolitan region. The economic development of the Montreal metropolitan region, particularly its rebound in the 1990s, has been based on its strong specialisation in a number of clusters. As the first step in developing its cluster strategies, the Montreal Metropolitan Community 2005 (CMM) – the regional planning body serving 82 municipalities which covers the functional geographical area of the metropolitan region and which is responsible for the planning and the financing of economic development, transport and housing – examined the metropolitan economy and identified 15 clusters essentially based on their degree of development and interlinkages (Montreal Metropolitan Community, 2005). These clusters are classified into four categories: 1) competitive clusters (aerospace, life sciences, information technologies, and textiles and clothing); 2) visibility clusters (culture, tourism, and services); 3) emerging technology clusters (nanotechnologies, advanced materials, and environmental technologies); and 4) manufacturing clusters (energy, bio food, petrochemicals and plastics, and paper and wood products). These clusters accounted for 1 280 000 jobs (79% of the total jobs in this area) in 2001 (Montreal Metropolitan Community, 2005). The rest of the jobs in this region mainly concentrate in local services industries such as personal services, public

Box 2.3. Examples of different metropolitan cluster approaches (cont.)

administration and most health care and social assistance services. These regional clusters have stemmed from their ability to produce high-value added products and services and together created a hub of innovation in the rather diversified metropolitan economy. The first step was launched in the fall of 2003 and finished in late 2004.

The second and third steps involve developing an action plan for each cluster and preparing a regional innovation strategy and are carried out simultaneously. The point of departure in the case of Montreal is that the strategy should take a metropolitan-wide perspective to avoid the risks of heightening the tensions that exist between smaller municipalities in the region and the new largest city of Montreal (OECD, 2004c). A second principle of the cluster strategy is that it should address problems of duplication among institutions, streamlining interventions according to an agreed set of priorities. The CMM cluster plan intends to ensure that the entire community is committed to the course of action. The CMM selected a bottom-up approach with the cluster development initiative coming from the firms involved and their institutional partners in development. In addition to building the competitive capital of the clusters, the CMM proposes giving an organisation the mandate to support the dynamics of innovation for all the firms, whether they belong to a cluster or not, and to improve the region's overall innovation performance.

In co-ordinating the cluster development plan, the CMM suggests assigning each cluster a secretariat "to activate the cluster, safeguard the common vision, make good use of the competitive capital, see that the strategic plan is carried out and in the process, help improve the economic growth of the metropolitan area" (Metropolitan Community of Montreal, 2005). The secretariat will provide expertise in research and networking, cluster expansion, innovation and technology, education and training, commercial cooperation and policy action. Further, the CMM has decided to: 1) build an Integrated Transactional Information System (ITIS) to facilitate fast circulation of information among involved cluster partners; and 2) create a Metropolitan Competitiveness Fund through financing from the municipal, provincial and federal governments and the private sector primarily for value-added projects to stimulate and foster cluster development. The CMM, the Government of Quebec, the Government of Canada and the private sector are investing a total of CAD 6 million per year to finance the creation of industrial cluster initiatives as well as value-added projects to make these clusters more competitive and thereby make the metropolitan region internationally competitive. The cluster strategy has been developed with wide spread support and consultation from the CMM's Economic Development Commission (mayors and city councillors), the Technical Committee (Executive directors of the region's economic development corporations), elected officials on the CMM Board of directors and Executive Committee and the representatives of all the municipalities of the CMM, and the public.

Sources: OECD (2004c), *OECD Territorial Reviews: Montreal, Canada*, OECD publications, Paris, France; Metropolitan Community of Montreal (2005), "Charting Our International Future: A Competitive Metropolitan Montreal Region", Economic Development Plan (February), www.cmm.qc.ca/pde/documents/pde05_english.pdf; OECD (2005d), *OECD Territorial Reviews: Japan*, OECD publications, Paris, France.

more than a reformulation of traditional sectoral policies (Raines, 2002), they are widely regarded as innovative in bringing together formerly separate policy elements (Benneworth, 2003).

Identifying niches of excellence or competitive industry clusters is the first step before designing and implementing cluster policies. Cluster development policies often lack clear and well justified cluster identification approaches. Public authorities tend to develop clusters around knowledge-based industries (information technology and communications and biotechnology, etc.) without going through a well defined cluster identification process (i.e., carefully checking the cluster size, structure and competitive advantages). For example, in the *OECD metropolitan reviews*, only Melbourne and Seoul were found to have relatively clear methods of identifying industry clusters (location quotients, etc.) (Box 2.4). Policy makers need to be in a position to map industry clusters, better understand their potentials and obstacles, and design and implement effective development policies. There are both quantitative and qualitative approaches to identify industry clusters. Both are necessary for mapping and complementary to each other. A combination of different approaches will allow policy makers to benefit from their respective advantages for clearer mapping results. Adaptation to local economic contexts is needed in the mapping practice.

Quantitative approaches measure industry specialisations or trade flows between firms and may not be fully able to capture the inter-firm linkages (formal and informal). Quantitative approaches typically analyse industry sector data using methods ranging from simple measures of specialisation/industry size and change (e.g., employment, wage level, location quotients, establishments and related dynamics) to inter-industry linkage analysis (e.g., correlations of industry employment, economic base or input-output tables).³ Measure of specialisation alone are not methods of identifying industry clusters as they only measure single and multiple industries with no linkages involved. They therefore provide very limited information about inter-firm linkages if there are any. On the other hand, although estimates exist for quantitative linkages (particular trade flows on the supply-demand chain), they tend to be available at the national level. And they may not be able to capture the informal linkages whose importance in the new economy has been increasingly recognised. Therefore the application of these methods should be either used as a reference or combined with qualitative approaches for a more definite identification of metropolitan clusters. Quantitative approaches are particularly important for industry cluster benchmarking, which will help position industry clusters in relation to each other and understand their respective competitive advantages.

Qualitative approaches are able to capture information about informal inter-firm linkages and are complementary to quantitative approaches.

Box 2.4. Methodology for identifying clusters in Seoul and Melbourne

An example of first identifying clusters and moving from there to policies for strengthening them and then associating the area concerned with those products can be seen in **Seoul**, whose metro-region has promising industrial clusters, both in high value-added services (finance, business services, ICT, and digital content), and manufacturing activities (fashion and clothing, printing and publishing). These clusters have the potential to serve as drivers of the Seoul capital region's economy, and the city has conducted exceptional research in detailed mapping of these clusters and their location within the metro-region. They have a relatively tight spatial integration, niche specialisation and good cross-sectoral linkages; all of which make success more likely. The major challenges these clusters face stem from the fact that the capital region has lost its competitive edge in production costs in comparison to low cost countries (fashion and clothing), sometimes lacks economies of scale (printing and publishing), and needs ever faster technological upgrading and innovation diffusion (ICTs). Seoul has targeted financial support towards new strategic industries, including business services, finance, IT/bio-tech/nano-tech and digital content. Seoul Metropolitan Government (SMG) took the initiative to identify its industrial clusters using location quotients, which are imperfect tools but provide a first basis for analysis. Five major industry clusters were identified in Seoul City: two manufacturing clusters (fashion and clothing, printing and publishing), three services clusters (financial industry, business services and IT) and one emerging industry cluster (digital content). Despite the growing recognition of the Seoul capital region as a functional metro-region, no cluster mapping had ever before been conducted at this level.

For measuring localization and clustering of industries, **Melbourne** uses squared deviation of one industry's employment share within one local government association (LGA) from its employment share within the overall Melbourne Region. Based on this index, there are some indications of some form of high-tech clustering such as manufacturing equipment which comprises electronics and automotive manufacturing in Monash and to a lesser extent in Moreland. This is also the case for health and recreational services which are concentrated in Stonnington and to some extent in Boroondara. However, whether this is mere coincidence or whether there is already ongoing cooperation between firms and universities cannot yet be confirmed.

Source: OECD (2005f), *OECD Territorial Reviews: Seoul, Korea*, OECD publications, Paris, France and OECD (2003b), *OECD Territorial Reviews: Metropolitan Melbourne, Australia*, OECD publications, Paris, France.

Qualitative approaches include interviews, expert opinions, focus groups and surveys.⁴ The expert opinion approach often aims to debrief experts including industry leaders, public officials, and other key decision makers about regional economic characteristics and trends to validate hypothetical or assumed strengths or weaknesses. It is especially valuable for the identification of a region's potential opportunities for new products. Surveys of local firms may be used to identify local and non-local economic linkages.⁵ Although this provides some insight for cluster analytic work, this approach is labour intensive and thus relatively expensive unless its modified fast version is adopted (Stimson, Stough and Roberts, 2002).

Qualitative methods provide a complementary approach in understanding functional interdependence and knowledge spillovers. They are particularly helpful in understanding informal linkages among businesses and local institutions. Simplified versions of these approaches are more applicable for cluster mapping to accommodate a short timeframe compared to other methods, particularly in studies conducted for immediate policy relevance. Qualitative approaches are particularly important for industry cluster policy studies for metropolitan regions because the dynamism in these regions is often dramatic, especially in terms of knowledge- and innovation-led growth. Data for these changes are always lagging behind the trends. Detecting the new trends requires knowledge and observations from businesses directly involved in the changes.

The ambiguity of cluster identification thresholds does not however prevent the development of certain criteria for cluster membership. Despite the various cluster identification methods, the identification process turns out to be somewhat arbitrary: which sectors should be included in a cluster and which should not? The ambiguity arises because industry clustering is characterised by the continuum of linkages or relationships among firms and institutions, and there is no clear cut point to declare their boundaries. This is especially true with the rise of the new economy where fusion of different technologies has become a trend, for example the interactions between ICT, media and entertainment in AOL Time Warner. The situation is even worse for rapidly growing metropolitan regions such as San Diego and Johannesburg whose functional (economic) boundaries have become less clearly detected. Quantitative thresholds may be able to be developed, but their credibility is doubtful due to data unreliability and a limited grasp of the dynamism of an economic system. In this respect, an ideal cluster threshold would be unlikely, and cluster analysts or policy practitioners are encouraged to act as entrepreneurs in developing their own cut off criteria based on their interpretation of the network and economy. Policy considerations will thus play a part. For example, two industries can be considered as parts of a cluster

as long as they share the same type of barriers in their external environment that can only be removed through joint action (Ketels, 2003).

Once industry clusters are identified, tailor-made cluster development approaches should be adopted to accommodate cluster and metropolitan peculiarities. The logic underlying clusters discussed earlier suggests the importance of exploring the specific characteristics and capacities of individual areas in order to determine what is most likely to build and enhance their competitiveness. Currently much effort in this field concentrates on building high tech clusters (e.g., ICT) and science parks irrespective of these factors. There are no effective “one size fits all” policies: tailor-made approaches are necessary. Regional differences not only refer to different socioeconomic contexts but also to different types of clusters (manufacturing *versus* services, knowledge intensive *versus* capital intensive, etc.) and their development stages (young *versus* mature, existing *versus* potential [embryonic]), etc. These differences have to be factored in when designing policies. Similarly, there are limitations to the possibility of applying successful lessons (or very specific policy instruments) from other regions to a particular case. If they are applicable, they have to be tailored to accommodate the differences. This is especially true for cluster policies which focus on building subtle relational assets.

Incorporating sectoral differences is needed in designing and implementing cluster policies. Industries show differences in their “capital requirements, sunk costs, competition in factor and product markets, mixture of speed and maturity in product development, influences of the demand side such as that of businesses requiring intermediate products *versus* end-users, the speed of adjustment and hence for skills upgrading, and so on” (Andersson et al., 2004). In broad categories, Wyatt (1998) shows different requirements of such industries as manufacturing, high-tech, health care, energy, finance and services for organisational skills, creativity, ability to deal with ambiguity, ability to influence or persuade, communication skills, interpersonal skills, technical knowledge and flexibility. More differences will be revealed when more detailed classifications are used. For example, in the Stockholm metropolitan area, biotechnology needs more investment, and the outcomes may take more time to realise than the ICT cluster, another high-tech sector. Research shows that the development of the biotechnology industry relies on two major sources – pre-commercial medical research and continuing private sector investment in product development (Cortright and Mayer, 2002). This industry is different from many others in that it is time- and resource- consuming with low odds of success. Further, different metropolitan industry structures and relations also imply adopting different policy approaches. For example, on the one hand, metropolitan economies heavily dependent on big firms in Helsinki, Stockholm and Seoul need to pay extra

attention to fostering their SME growth. The sectoral differences therefore entail different policy instruments to fulfil the requirements of specific clusters. On the other hand, the dominant presence of SMEs in Milan creates an environment where R&D activities seem unsustainable, posing a challenge for the region's cluster development. The recent attempt to face the challenge, the Metadistrict policy, may turn out to be effective (Box 2.5).

Policies should also fit clusters at different stages. Different policies are needed for reviving old clusters, upgrading established ones, or encouraging or assisting embryonic ones (Martin, 2002). Research shows that the general creation and nurturing of networks and partnerships seems important at early stages of cluster development whereas for mature clusters more purpose-specific networks may be more useful (DTI, 2003). Partnerships or networks remain important for sectors in decline, to help firms face challenges or potential threats on the market. For example, as the focus of the competition in the clothing industry shifts from production factors and costs to creating designs and brands, the fashion and clothing industry cluster in the Seoul metropolitan region faces challenges of how to stay responsive to market demand. Partnership and networks among member firms may enable them to pool resources in order to access expertise. For the emerging digital content cluster in the region however, growth potential lies in the fusion of traditional content industry and advanced information technologies, and networks would aim at furthering this mission. Research is needed on the possibly different forms that should be taken by clusters and policies towards them in these different circumstances.

Industry cluster policies should be accompanied by diversification policies for a well balanced industrial growth environment. The issue of diversity *versus* specialisation has always been a debate in urban development and the popularity of industry clustering in metropolitan regions has further stimulated this debate.⁶ There are concerns that the general focus on the creation of high technology clusters tends to leave other economic activities in obscurity and therefore devalued (Sassen, 2003). The debate on the role of industrial composition in the growth of cities is far from reaching a definite conclusion. There may never be one, as suggested by the coexistence of both specialised and diversified cities (Duranton and Puga, 2000), but evidence tends to suggest that big metropolitan areas with much internal diversity spur innovation.

In addition, cluster policies can be significantly better tailored if government authorities understand how specific framework conditions work for different industries (or businesses). One important lesson learned from Danish cluster policy for metropolitan areas is the necessity of a dialogue between the authorities and the cluster industries (Rasmussen, 2003). Cooperation between different authorities is also a crucial part of this dialogue

Box 2.5. Metadistricts to strengthen the SME growth in Milan and the Lombardy region

The metadistrict is a territory, identified by the regional government of Lombardy in 2001, containing all activities involved in a supply-chain rather than a certain sector. The aim of identifying metadistricts is to improve local networks of firms and to promote meso-institutions able to support collective action and then innovation throughout the supply-chain as a whole. Clusters of small firms are a looser organisational entity than a corporate hierarchy, thus they need meso-institutions to produce a shared vision to co-ordinate their activity and to innovate. Furthermore, through metadistrict policy, the Lombardy Region aims at enhancing high-tech sectors in its territory by promoting linkages among SMEs and such knowledge-intensive institutions as universities and research centres. Six metadistricts have been identified: food and non food biotechnology, ICT, new materials, fashion and design.

Qualitative and quantitative approaches were sequentially implemented in defining the metadistricts. The regional government first implemented a *qualitative* methodology to select key sectors. The qualitative approach takes into account the territorial contiguity (but with less intensity than in a true industrial district) of activities involved in the same supply chains, the supply-chain's relevance within regional economy and the presence of leading firms (not necessarily in terms of size) within the supply chain. When it comes to selecting knowledge-intensive supply chains, the regional government specifically considered the location of universities and research centres and related yearly patent registrations. It then took a *quantitative* approach to define borders of metadistricts. This measures the specialisation of municipalities in selected sectors. Sectors on each supply chain are first classified with two-digit NACE codes (each supply chain is often composed of more than one sector). Then, the shares of the numbers of firms of more detailed sectors (three or four digits) are compared across the two-digit sectors and municipalities to determine local (municipal) specialisation in the Lombardy region. Based on this approach, the municipality of Milan is identified as part of each metadistrict.

The presence of firms and other institutions within the Milan metropolitan area in the geographically more widely defined metadistricts is a remarkable improvement on the former (statistical) definition of industrial districts.* The former approach concentrated on small geographically concentrated areas. The new approach makes it possible to develop policies to enhance important linkage between specialised metropolitan suppliers and SMEs in the less populated part of the region.

Box 2.5. **Metadistricts to strengthen the SME growth in Milan and the Lombardy region** (cont.)

Metadistrict policy also provides public financial incentives for joint research and development projects presented by networks of firms and knowledge-intensive organisations (such as universities, research centres, or other high-tech firms). Given the dominance of SMEs in the region, a concerted effort and linking with main R&D actors is needed. Within a metadistrict, firms and R&D institutions have to build a network and plan together for specific research projects in order to be evaluated by the Lombardy regional government and receive public funding.

* The Italian government had defined industrial districts between 1991 and 1993. The process of quantitative definition of industrial district started in 1991 when Istat (Italian Statistical Institute) divided the entire Italian territory into LLSs (Local Labour Systems). LLSs were defined by merging municipalities containing their labour market (commuting flows). In 1993, LLSs were used as base units to define industrial districts according to 5 indexes: 1) percentage of manufacturing firms on total; 2) entrepreneurial density (local units/population); 3) specialisation of local production (workers in a sector/workers *100); 4) weight of the sector of specialisation; and 5) percentage of SMEs in the sector of specialisation (SMEs workers/workers). In metadistricts the base unit are municipalities instead of LLS.

Source: OECD (2006b), *OECD Territorial Reviews: Milan, Italy*, OECD publications, Paris, France.

process. Co-operation between labour unions, professional associations, cultural and social organisations is also involved in the process of cluster formation and development. A dynamic network among public and private actors is essential for the development of the economic drivers of entrepreneurship and innovation (Parkinson in ODPM, 2004). Building and enhancing these linkages thus help create and maintain the dynamics of these driving factors in order to ultimately build competitive advantages. This issue demonstrates the importance of governance capacity and of new flexible forms of governance, as will be discussed in the following chapter.

Important to the strengths of clusters and other networked production systems is the existence of “local collective competition goods” to favour business growth and help clustered activities flourish.⁷ Local collective competition goods are locally provided services and public goods that companies can use to develop their competitive strategies, but that they do not have to acquire through the market. Firms, especially SMEs, are dependent on the environment in which they are located to provide them with different types of these goods. Some of them are general (such as the transport infrastructure), but many are sector-specific (for example, links between particular university research departments and science-based industry). Local collective competition goods are not necessarily made available as public services or as deliberate products of public policy: they may be provided

through local business associations, or even emerge informally and implicitly within the working community (as in the case of the tacit knowledge mentioned above). However, it is possible for policy makers to explore what scope there may be for encouraging and stimulating the production of such goods within their regions. Particularly in the knowledge-based sectors of the contemporary economy, important sources of local collective competition goods are the networks that bring together entrepreneurs and those working on innovation within a region's higher education and research institutes.

Higher education institutions, research institutes and regional economies

Often as an aspect of networking construction and clustering, virtually all economically innovative regions exhibit close links between economic institutions and universities and other centres of advanced research and study. The contribution of higher education institutions (HEIs) and research institutes to regional economies is exhibited in various ways, including local consumption, housing, human capital and innovation etc. For example, in both OECD and non-OECD countries, empirical studies show that the most efficient policy tools for encouraging the development of the biotechnology industry were not necessarily those that required extensive real-estate projects, but rather initiatives to facilitate mutual learning and flows of human capital. Since the emergence of DNA techniques in the 1970s, several OECD countries opted for biotechnology as a strategic industry. Biotechnology has very distinctive characteristics in the sense that it is not defined by particular products or services, but has commercial applications in products and processes across a wide variety of industrial sectors, including pharmaceuticals, food processing and waste water management. It also implies very close connections between basic scientific research and commercial biotechnology (Box 2.6). While much policy development in this field has involved national governments, there is important scope for action at the metro-regional level, which combines both the proximity at which detailed collaboration is easiest and sufficient scale to capture diversity and high quality. The scale of a centralised system in a large state is not essential to scientific performance, as is shown by the federal character of higher education policy in Germany and the USA and the strong records of the small Nordic countries.

With rapid technology changes, single universities or research institutes may not be able to accommodate the needs of business development for skills, knowledge and innovation. It is therefore notable that the most successful high-science locations today are those that take a multiple form, rather than a link between firms and a single university (*e.g.*, Boston, San Francisco, the Cambridge/Oxford/London triangle, Munich, Stockholm, Helsinki)⁸ (Box 2.7)

Box 2.6. Examples of industrial liaison programmes in OECD countries

One of the best known models of linkages between universities and companies is the Massachusetts Institute of Technology (MIT) Industrial Liaison Program in the United States. After paying a membership fee that varies according to their size, companies have unlimited access to specialised information services and seminar series, a monthly newsletter that includes details of ongoing research and outlines new inventions, the directory of MIT research activity organised by area of expertise to make it easier to track down by specific interests, faculty visits and expert meetings for companies that often result in consultancy or research sponsorship. The programme is particularly attractive to companies because it is managed by a panel of Industrial Liaison Officers (ILO), each one being responsible for a focused portfolio of companies with the responsibility to serve their unique interests and needs.

While this fee-paying model might be perceived as a special case by smaller universities that do not expect to derive the same level of commitment from companies, other universities have developed “community clubs” for companies interested in the university’s work. In the UK for example, Cambridge University’s Computer Laboratory and Newcastle University’s Centre for Software Reliability have both created a club that invites companies to seminars and symposia or distributes copies of technical reports and organises exchanges of materials.

On a more individual basis, companies can also sign consultancy agreements with an academic. There exist many various forms of consultancy agreements, from small-scale private arrangements to broader collaborative work that may result in the hiring of graduate students in the consulting company, future research sponsorship agreements or grants of equipment. This also represents a way for SMEs and universities to link together despite the lack of a natural basis for collaboration because an increasing number of small high-tech companies are becoming research-focused and many start-ups are born out of specific knowledge transfers.

Source: Quoted in OECD (2004b), *OECD Territorial Reviews: Busan, Korea*, OECD publications, Paris, France.

One particular case is the often cited Research Triangle Park of North Carolina. The park is owned and developed by Research Triangle Foundation, a non profit organisation, which consists of three universities in this area – Duke University (Durham), University of North Carolina (Chapel Hill), and North

Box 2.7. Co-operation among higher education institutions in Öresund and Melbourne

An example of the role of universities in high-tech development can be found in the **Öresund**. This is a cross-border region comprising the Danish island of Zealand including Copenhagen the capital city and the Skåne region of Sweden, with Malmö, Sweden's second largest city. Since 2000, the two cities have been linked by a rail and road bridge. This new transport infrastructure has resulted in a single functional region spanning two different countries. The Öresund region has developed significant strength in knowledge-intensive activities including the medical and pharmaceutical industries and certain segments of information and communication technology industries. It is also strong in food processing, and has developed an environmental cluster with companies that either produce environmental technologies or make production, of products and services more environment-friendly. The education sector seems to be in the forefront of promoting co-operation among knowledge generators and users. With a total of 20 universities with 130 000 students, the Öresund Region has many strengths in the education and research sector. More important than simply the existence of these resources, however, is the co-operation between universities that has developed over time. Long-term informal co-operation was formalised in 1997 with the creation of the Öresund University. This institution has been a leading actor not only around formal scientific research and education, but also around the creation of institutions to promote more informal networking activity and information sharing for economic activities. Working in collaboration with researchers, business leaders and policy makers throughout the region, the university has helped in identifying critical driving growth clusters and facilitating the development of networking associations in these areas. The organisations – Medicin Valley Academy, Öresund IT Academy, Öresund Food Network, and Öresund Environment – are already playing an important role in promoting networking and integration across the region, and show a great deal of promise for the future.

The economy of **Melbourne** is similarly characterised by a strong presence of universities, non-profit health research agencies, and Australian Commonwealth institutions, matched by an above-average share of the labour force with a tertiary or university degree and, compared with other states, a high proportion of employees in management and administration or other professional occupations. Melbourne's multicultural atmosphere and immigrant communities are an asset for international trade, innovation and entrepreneurship, reinforced by the success of Victoria in attracting more undergraduates from abroad than other Australian states. Major universities

Box 2.7. **Co-operation among higher education institutions in Öresund and Melbourne** (cont.)

have a clear emphasis on providing business relevant education and research, with an increasing emphasis on commercialisation of intellectual property. The state's overall research and development intensity is above-average within Australia. However, the share of research and development in universities is lower in Victoria than in other states, which could undermine their role in basic research. Melbourne's challenge is to further improve its role as a base for knowledge research in order to reach a higher performance in all forms of education as well as basic and applied research in universities, research institutions and firms as compared to international standards. More attention should now be paid to high-tech or high-growth industries. For instance, Victoria's manufacturing industry is concentrated on sectors such as motor vehicle and transport equipment. While some R&D-projects have been introduced, this is not yet reflected in the level of research and development; meanwhile, industries like photographic equipment and chemicals have a high R&D intensity, but still only a relatively low share of overall manufacturing employment and output.

Source: OECD (2003c), *OECD Territorial Reviews: Öresund, Denmark/Sweden*, OECD publications, Paris, France and OECD (2003b), *OECD Territorial Reviews: Metropolitan Melbourne, Australia*, OECD publications, Paris, France.

Carolina State University (Raleigh). The park (collaboration) has contributed to the prosperity of companies in this park such as Cisco, IBM and Sony/ Ericsson, etc.

In addition to their research contribution, higher education institutions contribute to human capital development. This includes both their production of graduates and staff training that they often provide for local economic actors. Retaining graduates in the region is a key issue in human capital development. Incentives such as job placement through university-firm linkages should be provided to help maintain a quality labour force. Also, metropolitan regions in OECD countries often face shortages of highly skilled workers. Attracting international students and researchers to local higher education institutions is a good means to obtain international talents. English-speaking countries like Australia do not rely solely on the inherent advantage of language but rather implement thoughtfully planned policies to attract talented students, while Finland offers comprehensive benefits to targeted foreigners with key skills (Box 2.8).

Box 2.8. Making higher education institutions more attractive to international students and researchers: the example of Australia and Finland

In the post-Second World War period, universities in **Australia** offered free enrolment to international students from the Asia Pacific region under the Colombo Plan policy. Fees were charged again on international students after 1986 but a significant scholarship programme was maintained and Australia is currently the third most popular destination in the world (after the United States and the United Kingdom) for young people wishing to study overseas. Australia has made a concerted promotional effort to attract international students and has supported these marketing efforts by providing very quick visa issuance (sometimes in one day) and allowing people to change their status from tourist to student without leaving the country. 40% of Australia's international enrolments involve students studying both at Australian universities and colleges operating in other countries. For example, Australian universities have numerous partnerships and joint programmes in Japan.

Attempts to attract international talent to the Greater Helsinki Region (GHR) in **Finland** were aimed at responding to two problems: the declining domestic labour share in an ageing society and the shortage of highly skilled labour in the region. Up to 2.1 million foreign workers were forecast to be needed by the year 2020. Policies for upgrading the skills of immigrants as well as attracting new skilled foreigners were prioritised. First, the Immigrants' Employment and Family Support Projects, an Open Learning Centre and a Youth Activity Centre were established in order to improve the employability of immigrants. Second, some teachers and researchers from certain countries were entitled to full tax exemption in Finland if their employment met specific criteria. Finland also lowered the income tax burden down to 35% (instead of progressive tax) for "foreign key persons" residing in Finland for more than six months. "foreign key persons" target teachers or researchers in an institution of higher education in Finland, or persons whose monthly salaries are at least EUR 5 800 throughout their stay in Finland and whose employment in a Finnish enterprise requires special skills.

Regional innovation system strategies

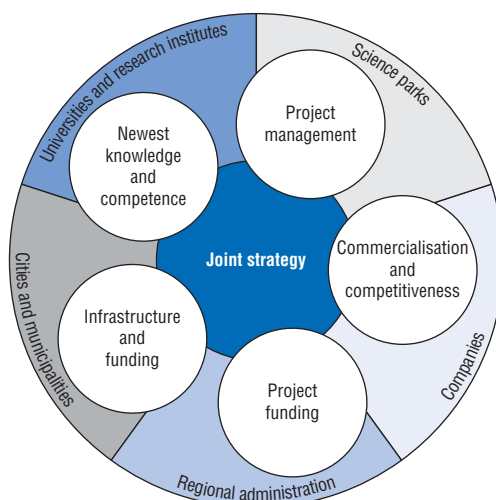
Perhaps the most fully developed form of cluster development incorporating higher education and research alongside firms and other relevant agencies is the idea of a regional innovation system (RIS). This concept was introduced in economic theory during the early 1990s. It describes a "concentration of interdependent firms within the same or

adjacent industrial sectors in a small geographic area” (Isaksen and Hauge, 2002). This systemic approach to innovation recognises that innovation stems from interactions within a network of different actors including firms and institutions, whereas it is seldom the result of efforts within a single firm. While national systems of innovation are invoked to explain differences in innovation performances between countries, *regions* are increasingly recognised as the cradle of networks of innovators, local clusters and cross-fertilising effects of research institutions (Lundvall and Borras, 1997). A RIS can stretch across several sectors and clusters as long as their constituent firms interact. At the same time, clusters can develop close links with knowledge organisation outside the RIS (Asheim, 2002).

A regional innovation system development strategy should follow a holistic approach. The concept is closely linked to that of industry clusters. In modern innovation theory, the strategic behaviour and alliances of firms, as well as interaction and knowledge exchange among firms, research institutes, universities and other institutions, are at the heart of an analysis of innovation processes. Innovation and productivity capacity upgrading is considered a dynamic social process which evolves most successfully in a network where intensive interaction exists between those “producing” and those “purchasing and using” knowledge (Roelandt and Hertog, 1999). The exchange of knowledge and information in industry clusters is most important in updating firms’ products or services and producing new products or services and thus maintaining their competitiveness on the market. This primarily Nordic concept has been applied in the most direct way in Finland, particularly in relation to the Greater Helsinki metro-region. At the heart of this is the Centre of Expertise Programme of the so-called “Triple Helix Model” (Figure 2.1 and Box 2.9).

Inter-firm linkages constitute a key component in technology innovation and industry growth. The benefits of inter-firm co-operation have been considered a central topic in cluster policies. In an industrial system, firms may interact with each other through joint development, resource sharing, structural knowledge exchanges, informal contact and monetary business transactions (Andersson *et al.*, 2004). According to the Australian Bureau of Statistics Survey (2005), about 27% of innovating firms collaborate with other firms. Collaborations take the form of joint marketing, joint R&D and licensing agreements. The collaborators are in many cases located within 100 km of the responding firm. Large firms usually have the advantages of playing a leading role in overall cluster development due to their greater capability to carry fixed costs and therefore strong analytical competencies than SMEs, a critical mass of experienced managers and leaders and established supplier customer and supplier base (Andersson *et al.*, 2004). For example, in Mountain View (San Jose), California, Google, the leading internet search engine, signed a deal in

Figure 2.1. Finnish (Helsinki Region) Centre of Expertise Programme



Source: Laurila, T. (2005), "Innovation Strategy Process in the Helsinki Region", Baltic Sea Region Micro/Nano Technologies Seminar, available at www.fmnt.fi/berlin/Lectures/Laurila.pdf.

September 2005 to build a technology-research complex on land owned by the NASA Ames Research Centre. It is expecting the new USD 300 million centre to attract leading scientists and technology experts, and foster collaborations on research ranging from supercomputing to biotechnology and to commercialise any discoveries.

In building inter-firm linkages and facilitating regional innovation, SME growth needs particular attention. Evidence suggests that research and development undertaken by old large firms in mature industries tends to be weighted towards incremental and process innovation, rather than transformational innovation, which is more likely to come from new firms and new industries. A US Small Business Administration Survey Report (2005) shows that small firms in the United States (fewer than 500 employees) produce 13-14 times more patents per employee than large patenting firms and that these patents are twice as likely as large-firm patents to be among the one per cent most cited.⁹ Building inter-firm linkages, particularly among SMEs, is however to a large extent a process of trust building, which often needs third parties with no direct interest to foster. SMEs in many cases start as sub-contractors or spin-off firms to large firms as in the case of Silicon Valley. Spin-off firms tend to compete fiercely against each other rather than co-operate. They may be reluctant to do so because of fears that their ideas or resources will diminish in collaboration (Andersson et al., 2004). They tend to co-operate either when there is great pressure from the market or when the collaboration clearly supports their interests. These concerns are particularly

Box 2.9. A well-functioning triple helix model: the example of the Helsinki Culminatum Ltd.

For 15 years, the City of Helsinki and the University of Helsinki have built up their co-operation, the most important ingredients of which are: promoting science-driven business enterprises with the aid of a common business incubator and science park, cooperating in urban planning and traffic planning to develop campuses and transport and logistics between campuses, creating a common Student City concept to increase international attractiveness, promoting urban research by creating initially six (today nine) professorships in urban research, and collaborating with the city's own think-tank Helsinki City Urban Facts.

Besides their international co-operation, the University of Helsinki and the City of Helsinki have been initiators in establishing the *Helsinki Region Centre of Expertise Culminatum Ltd.* This public-private organisation is based on the Triple Helix model, which means that one-third of its shares are owned by the local universities and research institutes, one-third by the City of Helsinki, its neighbouring municipalities and the Uusimaa Regional Council, and one-third by the business community, financiers and science park companies.

Helsinki Culminatum forms a cooperation forum and a basis for the development of common projects. It focuses on two main missions, namely:

- Managing regional cluster building activities in six selected sectors of the knowledge-based economy. Development programmes and actions are funded mainly by the cities and by national innovation organisations. In sharing their knowledge, universities and polytechnics play a crucial catalysing role in development projects. One of the focus areas of Culminatum is to help university spin-off companies grow. Cluster building activities by Culminatum combined with the funding from the National Technology Agency (Tekes) have contributed to increased interaction between SMEs and higher educational institutions.
- Developing the Helsinki Region as a world class innovation eco system – as an Ideopolis. Early 2005 saw the birth of *Yhdessä Huipulle* (Together to the Summit), a common innovation strategy by Culminatum's owners presenting 26 common development projects of the universities, cities and the business community on four key issues: 1) to increase the international appeal of local research and education; 2) to develop strong clusters and create test beds and living labs for product service development; 3) to apply innovations to renew the welfare services provided by the cities and to consolidate the role of the cities in the R&D; and 4) to support university-driven business growth by, for example, developing a second generation science park concept.

Source: Quoted in OECD (2006d), *OECD Territorial Reviews: Stockholm, Sweden*, OECD publications, Paris, France.

valid when SMEs collaborate with large firms, as the dominance of the latter may pose threats growth of SMEs.

One way to foster entrepreneurship and SMEs' growth is through public private partnerships. The importance of PPPs in regional development and SMEs growth has been widely recognised as a way of ensuring the application of the power and efficiency of the private sector to develop initiatives at all levels. PPPs can also be important for the formation of regional networks. Government authorities can function as a broker to facilitate the development of clusters and local incubation centres, developing an informal venture capital through Business Angel Schemes, and specialist skills in education and technology support with priorities determined in partnership with local clusters, and resources on a long-term basis. Certain types of inter-firm linkages are less inclined to thrive via spontaneous interaction; they need institutional inducement. An example is to make firms eligible to apply for certain public support funds for R&D or networking under the condition that they engage in joint projects with other firms.

PPPs have often helped and played catalytic roles for creating regional innovations, provided the public authorities have a clear idea of the region's priorities. In order to stimulate this role for PPPs, the public sector first needs to initiate long-term master plans of regional development and prioritise infrastructure projects based on their external benefits for regions. It next needs to establish implementation policies for the partnerships, which are consistent with the plans and do not sacrifice the public interest. During the above processes, the public sector needs to identify or create more favourable regional conditions for PPI. For example, it needs to have enough capacity to further improve schemes and proposals from the private sector and to be able to incorporate innovative policy measures whereby the combination of the public plans/resources and private expertise/resources creates synergy for enhancing not only regional competitiveness but also regional attractiveness. If the private firms of a region are keen to invest in infrastructure facilities and manage them or even initiate the projects with enough financial and managerial capacity, it can be assumed that the region's economic needs for infrastructure are fully identified and understood by private partners. These can be regarded as positive indications for the regional impact. Local firms should be involved in PPPs devoted to local development. As users of collective services, they have views on their needs in terms of infrastructure, training, etc. And as suppliers of services, they will often be more attuned to improving outcomes than other actors that are less directly involved. Without infringing rules of competition, it would be worthwhile to provide them with the support and incentives necessary for them to participate in this way. This is particularly important with respect to SMEs. A similar logic should be

applied with respect to citizens' groups and other non-profit organisations (OECD forthcoming c).

The creation of an organisation can be a good idea to support the development and implementation of a holistic innovation strategy. For example, the creation of a Competitiveness Council could be a concrete initiative to support regional innovation through political leadership and public/private dialogue as was experimented in the US State of Massachusetts (Box 2.10). Such a Council could be formally led by a region, county or municipal political leader (depending on the governance model in place) and a leading business executive. The council would include key representatives of the regional "triple helix" (public, private and research sectors). The Council could be given a key role in the development of an overarching economic strategy for the region. It could guide a number of working groups focused on specific clusters and cross-cutting issues. In these working groups, specialists from companies, government agencies, universities, and other institutions would identify specific actions and define responsibilities to execute them. The public sector's role in the Council should be carefully assessed, as experience suggests that the private sector should have a key operational role if genuine partnership is to develop.

2.3.3. Alternative futures for non-high-tech regions

The success of science-led, high-value-added regions is likely to lead policy makers almost everywhere to seek to imitate these successes, and to use the role of higher education and research institutions to ensure that their regions are competitive in high-tech sectors. However, as noted above, it is not possible for more than a small number of regions to succeed in this task. Further, the sectors concerned are usually capital-intensive, leading to relatively low employment creation for a given unit of investment. It is therefore necessary to examine a wider range of activities, and a wider range of engagements between the economy and higher education and research than is featured in the most prominent examples. Earlier work by the OECD (2005a) identified attempts to found technopoles as particularly vulnerable to over-ambitiousness and distinguished between "real" and "quasi" technopoles. The latter did not really display the networking and cross-fertilisation aspect of the technopole concept and were essentially industrial parks, business support or information centres. The construction part of such interventions is easy to design and is a tangible political achievement, but the cross fertilisation and value added aspects are much more complicated to generate, slow to emerge, difficult to measure and, as a result, difficult to fund. They appear to work best when the "raw materials" of the system are already in place, such as a highly regarded R&D centre or some co-location of linked industries.

Box 2.10. Competitiveness councils

The main purpose of establishing a competitiveness council is to provide a dialogue mechanism between the public, private, labour and academic sectors. Particularly by tapping the expertise and knowledge of those non public sectors, a competitiveness council is able to provide the government with well-substantiated and concrete policy recommendations and program of actions. It can also help to effectively mobilise the unique skills and resources of these non-government partners in implementing action recommendations. The establishment of a competitiveness council however should be deeply rooted in the national and regional socio-economic and institutional context. The experience of building national competitiveness councils shows that they may differ in their institutional forms, membership, funding and focused areas when making policy recommendations. For example, in terms of the institutional forms, the Irish competitiveness council was instituted by an act of government. The council in Singapore was created based on a directive of the President of Singapore to the Ministry of Trade and Industry to study the future of Singapore's competitiveness. And the US Council on Competitiveness was created by a coalition of company, university, and trade union leaders to work with government to "elevate national competitiveness to the forefront of national consciousness". The membership of each council represents a wide range of sectors including senior levels of the government, private and public sector. Competitiveness councils may also vary in their specific duties and reporting requirements. The Irish council reports directly to the government to provide their work plans and specific recommendations on policy improvement. Ireland shows a most comprehensive reporting by providing an advisory benchmarking report and an annual policy recommendation report. A distinctive character of a competitive council from other forms of partnerships may be that rather than simply providing consulting and training services, it works hand in hand with the government in building and strengthening competitiveness policies. It should be noted however that although the councils provide strategies to the government, they do not supersede the ability and necessity of industries to get their own action agendas and strategise for industry competitiveness.

Competitiveness councils can also be built at the regional level to address local needs of facilitating local economic growth and building regional competitiveness. A particular example is the establishment of regional competitiveness councils in the State of Massachusetts. In 2003, in order to adopt a well co-ordinated approach to identify the state's strengths and weakness and maximising regional growth potential, Mitt Romney, the Massachusetts governor, set up six regional competitiveness councils,

Box 2.10. Competitiveness councils (cont.)

representing the following regions of the state: Berkshires, Cape and Islands, Central, Northeast, Pioneer Valley and the Southeast. Each of the six councils consists of about 25 members representing private businesses, higher education, and key elected officials in the respective region. They are each co-chaired by a local business leader and by the State of Massachusetts Secretary for Economy Development. The key difference (noted by Romney) between existing organisations and the new competitiveness councils is the inclusion of higher education leaders. Responsibilities of the regional councils include conducting an in-depth analysis of their regional climate, assessing local abilities to attract new companies, identifying companies and jobs currently at risk, and developing a strategy to create opportunities by building on regional resources such as human capital, infrastructure and financial investments. The councils are expected to develop strategy documents for their regions that identify action priorities for government agencies as well as for the private sector and the research and education community. These regional councils were built in many ways on the experience from about a decade ago when Massachusetts created a Governor's Council on Economic Development for the entire State in response to its severe economic downturn.

Source: The Commonwealth of Massachusetts Executive Department (2003).

It would be particularly unwise for decision makers at the level of an entire metro-region to make major speculative strategic investments to try to encourage new sectors for which there was little evidence of past success; even radical innovations usually develop from existing capacities and recognisable potential. Entrepreneurial activity is bound to include some cases of failure; it is the job of the market to clear the failures and advance the successes. It is more difficult for public policy innovation to deal with failure, when the innovation has risked setting down a set of general conditions that affect large numbers of firms and people. Policy makers therefore have to work interactively with the business environment, concentrating at first on two kinds of measures. First are those that enhance general infrastructure that might be of value to various high value added sectors without a prior specific commitment – such as general improvements in transport and environmental quality, or in collaboration opportunities for firms and university research institutes. Second are measures to identify innovative sectors that seem to be developing in the region, and which could advance more prominently and quickly with certain kinds of public intervention measure. These latter are likely to be more promising than sectors that have not found any comparative advantages in the region. An example is the up-grading of the textile industry being planned in Seoul (Box 2.11). In Milan, the development strategy is now

Box 2.11. **Upgrading clothing and textile industry in Seoul**

After many years of trying to support its textile and clothing industry through subsidies, the government of Korea has recently encouraged more innovative approaches, with particular interest in the Seoul area. At least the high value-added segment of the industry is seen as having a future, despite the growth of new competitors in China and other newly emerging economies. The clothing industry fits well into an urban environment and it is non-polluting. It also conveys a cultural value that could become an image-builder and thus contribute to the international branding of Seoul. Korean firms have remained weak in design and planning skills. Therefore, one of Seoul's measures to revitalise existing fashion business agglomerations was the creation of the Seoul Fashion Design Centre in 2000. This offers more comprehensive assistance than traditional industrial centres do. Its 720 m²-large facilities provide both hardware and software support to local fashion and clothing SMEs by offering various types of product development and planning infrastructure, an exhibition hall, a monthly fashion magazine (Fashion Focus) and a fashion-related information centre. Recently, specialised events have been organised in Seoul to promote designers both domestically and internationally. Seoul Collection Week (every spring and fall since 2000), Seoul Fashion Week and Dongdaemun Festival are starting to attract interest but need to gain prominence and to overcome intra-industry rivalries. The Seoul Fashion Design Centre also organises design contests to select promising fashion designers and sponsors them to participate in international collections and exhibitions (for instance in Paris, Milan, London and New York). It promotes overseas marketing by providing funding to cover booth rental fees as well as advertising and interpretation services.

More systematic and active networking between the Seoul Fashion Design Centre, fashion firms and the numerous local universities that offer specialised courses in fashion and design could help better promote talented domestic fashion designers. Although Seoul-based universities send some 45 000 designers every year onto the labour market, examples of internationally successful local designers have remained rare so far.

Source: OECD (2005f), *OECD Territorial Reviews: Seoul, Korea*, OECD publications, Paris, France.

focussing the region's established base in textiles (14 570 local units in 2003) that in recent years have been suffering because of the increased international competition. Specifically local authorities have launched the so-called "Metadistrict policy" with the objective to promote firms' backward linkages with knowledge intense universities or research centres, thus promoting the added value of their output (OECD, 2006b). If such policies succeed, the

distinction between the two kinds of measures diminishes as measures at the general level begin to be more tailored towards the kind of sector that is flourishing. It will however remain valuable for a metro-region to sustain an environment in which a diversity of sectors flourishes, with different trade and product cycles, and employing different kinds of labour.

Lower productivity metro-regions have particular problems, as their large scale is not necessarily associated with significant locational advantages. An example is Mexico City, which has a GDP per capita 48% below the OECD average for these regions.¹⁰ This is related to the weaknesses of the labour market and to overall difficult framework conditions linked with poverty and low levels of infrastructure and basic services. Only a limited number of industrial branches (pharmaceutical, automotive, printing and publishing), characterised by high capital intensity, higher inflows of foreign direct investment, and trans-national operations have been responsible for some sector-specific growth and productivity gains. These examples of good performance do not appear to be spreading across the metropolitan area where significantly weak levels of productivity prevail due to low educational attainment and investment in human capital development as well as to insufficient links between research and industry to facilitate and diffuse innovation. Overall, the most defining characteristics of the metropolitan economy are the consolidation of the tertiary sector as the driving force of the regional economy (in 2003, it was estimated that 75% of the workforce was in the service sector), a decline of manufacturing, a reduced capacity of large firms to generate employment and to compete successfully in international markets, and the increasing reliance (about 42% of the active population employed) on micro and small firms in both the formal and informal sectors. Only half are firms with an established workshop, (the rest being home- or street-based). These firms capture the smallest share of financial credit and invest the least in formal training and technology.

The informality of the labour market is often a characteristic of poorer metro-regions, and demonstrates that the transition from manufacturing to services is not always synonymous with economic up-grading of the city concerned. Although the decline in manufacturing is often accompanied in such cases as elsewhere by an increase in service sector employment, the ability of the formal labour market to absorb former factory workers in such contexts is often limited. The gap between labour supply and demand leads to the development of a high proportion of informal activities, in the case of Mexico City around one-third of all employment. If informal labour is considered in a wider sense, to include also people employed by enterprises or households, but having no work contract and no payment, the figure rises to almost half of total employment. A large informal labour market can have a high social cost, being closely linked with low levels of education and implying

little access to adult education, on-the-job training, and other human capital development mechanisms. To take another example, the informal sector accounts for almost half of the Istanbul economy, creating high negative externalities for the firms that remain in the formal sector. The activities involved include casual day labour, petty trading, street hawking, letter typing, knife sharpening, load carrying, street vending, and shoe shining. It is reported that there are about 500 000 street vendors in the city,¹¹ one of its largest sectors. Recent immigrants from Africa are particularly likely to find this kind of employment in that city.¹²

There are however sectors in regions with lower productivity where competitive advantages can be exploited and where there are resources on which development can be built. For instance, many firms establish head-office functions in Mexico City, but carry out their main operations in areas bordering the United States. This has enabled the city itself to develop rapidly certain advanced producer services, in particular accounting, law, finance, advertising, distribution, and communications. In terms of output, these sectors have consolidated as the drivers of the economy. The high specificity of advanced services, the availability of skilled workforce coming from the local notable universities, and the concentration of their main costumers provides these industries with strong incentives to agglomerate in Mexico City rather than elsewhere in the country, leading to the city being regarded as the only Latin American city with a major global services centre.

Micro-firms, an important and valuable source of employment in many large cities, often have difficult connections to public authorities: partly because there are so many of them; partly because, being so small, they have few resources to devote to relations with authorities; and partly because many of their activities are in the “black economy”. In many cities there is a wide technology gap between these firms and the sector of internationally competitive, export oriented firms. (In the wealthier metro-regions, the latter sector is large; in the smaller ones it is small.) While lack of access to modern equipment is a clear problem for micro-firms, lack of information about production methods and processes also appears to undermine the productivity of individual firms and whole sectors. Strong co-operative production chains, including links between SMEs and larger more competitive firms are hampered by weaknesses in areas such as standardisation and quality control. Addressing the technology and information gaps is critical to enabling small industries to achieve higher levels of productivity and reduce polarisation of the economy. The challenge for public policy is to reach these firms through a cost-effective enterprise development strategy. The difficulty is that the enterprise base is large and geographically diffused and the firms can be informal or semi-formal and, as such, hard to influence through public policy. The most effective way to help micro-firms overcome their low capital

structure and access technology is to facilitate their access to finance, partly by creating a venture capital system. They would also benefit from research institutes that they could access without paying high fees. However, it is often difficult for micro-firms to know how to gain access to financial or research institutions. There can be an important role for local public policy in finding means to help them solve this problem.

At the same time, it has to be recognised that even in the most successful regions not all workers will find employment in high value added sectors; indeed, one of the advantages of large urban agglomerations is that they produce forms of employment in services sectors for low-productivity workers. The problem is to enhance the quality of such employment, not to try to eliminate it. An advantage of Fordist mass-production industry was that, by putting highly productive plant at the disposal of low-skilled workers, it enabled them to achieve relative prosperity and security. In the post-industrial economy these workers find work in services sectors that do not reinforce them with capital, and in which very small firms and informal employment are often concentrated, bringing conditions of high insecurity. Many of these services are typically urban and related to large concentrations of people, such as cleaning and maintaining infrastructure, the provision of food outlets, and private services to households. Some of these services are provided publicly, which makes possible some stability of employment. In large urban agglomerations there may be sufficient business to enable stability also in the private sector. For example, labour-only contracting enterprises may have a sufficiently extensive customer base to enable them to provide stable employment conditions while being hired out to a succession of firms.

2.3.4. Summary: dilemma II

In today's economies former ideas of planning have been replaced by concepts of public policy marshalling support for the business environment. This includes providing necessary infrastructural support for economic activity, which for successful cities and regions crucially includes linking businesses to high-quality institutions of research and higher education. Concepts such as the regional innovation system will be key. These relationships are often based on specialised clusters of related sectors of production. To fulfil these tasks requires the formulation of a strategic vision. This becomes particularly important in metro-regions, which have been identified as economically functional areas that are typically not contiguous with existing political and administrative boundaries.

While this form of strategic vision avoids the risks of former approaches to planning, it remains vulnerable to the risks of failure always attendant on entrepreneurial activity. These will be reduced if a wide range of informed stakeholders is engaged in the process, but more importantly by ensuring that

diversity is built into all objectives: the large size of metro-regions equips them particularly well to combine both the specialisation of clusters and diversity. Risk is further reduced when policy makers build on existing points of strength and avoid unrealistic expectations. This includes facing the reality that by no means all metro-regions will become world leaders in high-tech activities, and therefore the need to search for strong, viable niches outside this range. Even in the most advanced regions, large proportions of the labour force will not work in high-tech activities; general and vocational forms of education and knowledge-building will need to be parts of the vision everywhere.

The new agenda of spatial development is broad. Competitive positioning in a new global economic geography shapes strategic preoccupations, particularly as regards major infrastructure investments and locations for new concentrations of business activities. It also highlights the importance of the cultural assets of a place to attract the skilled workers of the new knowledge industries and tourists. The need for environmental sustainability highlights both new conservation priorities and new ways of thinking about the flows of people, goods and waste products; the need for social cohesion leads to concerns for the quality and accessibility of particular resources, amenities and opportunities in the city-region. Housing remains the biggest single use of land, with impacts on health, safety, and the environment. As a result, spatial development strategies must go beyond merely indicating where major material investments should go and what criteria should govern land-use regulations. In other words, they have to be more than merely an aggregation of considerations and policy principles collected together in a plan or document. This suggests that their key task now is to identify the critical relations among many agents which are likely to shape the future economic, social, political and environmental qualities of territory. Spatial development strategies exert influence by framing ways of thinking about and valuing the qualities of a place and of translating plans into reality. This work in turn helps to mobilise the many actors inventing the futures of places by shaping their understanding and guiding their investments towards more sustainable outcomes.

The visionary and long-term view of the new territorial policy is best reflected in a long-term strategic plan. In addition to the critical function of promoting policy coherence and identifying obstacles to implementation, its main purpose is to send signals concerning government policy priorities and desired outcomes to the private sector, which after all is responsible for most of the investment in property and housing, and increasingly, infrastructure provision. The role of planning is not to dictate what goes where; rather, when linked to expenditure on infrastructure and to policies and programmes for SMEs, housing, education health and the like, flexible spatial planning strategies can help to leverage private investment and civic involvement.

These challenges however are difficult, given the inherited professional specialisations in the public and private sectors that deliver space-based services and goods, the frequent lack of multi-year and multi-sectoral budget for major projects, and the problems of co-ordinating private and public finance with different time horizons. Strategic plans should also include exploration of the synergies that can result from bringing together large firms and SMEs, universities and other research centres in order to develop local potential for regional innovation systems.

2.4. Dilemma III: Economic dynamism or liveable city?

Concentrations of population that account for part of the dynamism of some metro-regions also contribute to typical urban problems of congestion, poor environment, housing shortages and the formation of ghettos. Is there a choice between economic dynamism and having a liveable city?

Even in the most prosperous metro-regions there is strong evidence of the negative consequences of heavy concentrations of population. These include traffic congestion, pollution, urban sprawl, generally high levels of criminality, lack of open space and other deficiencies of the physical environment, housing shortages for poor people, the residential and social segregation of the immigrant populations who are attracted to large urban centres, especially when these are also capital cities. Poor people in large cities often have to cope, not only with their low personal incomes, but with enjoying lower levels and poorer quality of the collective goods available within the urban infrastructure. For example, although residents in the metropolitan region of Mexico City are endowed with the highest levels of access to basic services (water supply, electricity and drainage) of all Mexican cities, with a very high proportion of households having access to them, several poor municipalities in the State of Mexico face levels of access to basic infrastructure below the national average. These problems are common to all large OECD metro-regions, including the wealthiest. Yet, how to strike the right balance between policies for increasing the competitiveness of cities and policies for social cohesion and liveability is a major dilemma for the metropolitan areas of OECD countries.

- On the one hand, it is often argued that policies pursued by cities to redistribute wealth might dampen economic growth. In particular, in a global environment where cities and metropolitan regions are increasingly autonomous, cities are likely to be faced with the dilemma of devoting resources toward economic development or putting them into social spending. In the same vein, strong compliance to environmental norms might be advanced as an obstacle to the attraction of firms and thus to competitiveness.

- On the other hand, it is clear that competitiveness and economic growth will in the long term suffer if the major social and environmental problems outlined below are not resolved. In some cases it is easy to see their negative implications for competitiveness.

2.4.1. Attractiveness and sustainability

There is considerable evidence that a *good and attractive environment*, including well-performing urban infrastructure, is not an alternative to metropolitan economic success but in fact fundamental to its continuation. This seems to be so for two reasons. First, many of the problems that result from crowding impose heavy costs and inefficiencies: the most obvious are traffic congestion and poor transport networks. These problems are particularly acute in new developing cities such as Seoul, Mexico and Athens, but even in Stockholm, a metro-region noted for the quality of its overall infrastructure (Box 2.12). Second, advanced economic sectors are often engaged in a global competition to attract good staff, and these people would sooner choose to work in a pleasant city than a polluted, ugly, and crime-ridden one. The latter argument also applies to the attraction of tourists, an important form of actual or potential economic activity for many cities. Good infrastructure and attractive environment are also crucial components of clusters, innovation and territorial branding policies.

Although large cities are often associated with pollution and various forms of environmental damage, they also represent a scale of activities sufficiently large to permit the launch of serious positive policies for sustainability. Public authorities at city level have important powers over land use, transport and traffic, building codes and waste management. These can be used to have an impact on air pollution, energy utilisation and conservation, renewable energy use, and water conservation. The Habitat programme of the United Nations develops policies for application on these issues at all levels of government. More specifically at the local level, the International Council for Local Environmental Initiatives seeks to promote policies for “eco-efficient cities”.¹³ Among its 450 local government members are several, but by no means all, major cities within metro-regions.

The OECD case reports provide several examples of policies to meet the challenge of *reconciling environmental quality with economic success*. An example of such strategy is provided by Seoul with the Cheonggyecheon Restoration project that replaced an elevated expressway and its disadvantaged neighbourhoods with a fresh water stream and green spaces (OECD, 2005f). The objective was not only to help solve the inner city environmental problems, but also to reduce socio-economic disparities between the northern and southern parts of the city. Both public transportation reforms and control of private automobile use were implemented at the same time. During the

Box 2.12. Environmental concerns in some metropolitan areas

In **Seoul**, traffic congestion costs increased over the years 1999-2002 (from KRW 4.18 trillion in 1999 to KRW 5.31 trillion in 2002). The share of public transportation use dropped slightly (from 62.6% in 1999 to 60.6% in 2002) despite huge investment in subways and the introduction of bus-only lanes. The share of passenger cars increased from 19.6% to 26.9% over the same period. More commuters chose to drive due to the increasing commuting network and the lack of efficient public transport across the capital region. Out of all vehicles crossing the city boundary, the share of passenger vehicles and SUVs rose from 69.1% in 1996 to 72.9% in 2002. The proportion of those vehicles with only one passenger increased from 68.9% to 79% over 1999-2002. Traffic congestion has raised severe pollution issues within the capital region. According to the Ministry of Environment, the emission shares of the capital region are 42.7% for carbon monoxide (CO), 31.1% for NO₂, 38.1% for volatile organic compounds (VOCs), and 18.1% for PM₁₀ (excluding road dust) in 2001. In 2002, the city's ambient concentration of PM₁₀ was the highest (76 ug/m³ among all the major cities densely populated up to 5-10% of national total population within the OECD area. The NO₂ concentration in Seoul was at the second highest level (only next to Bratislava) among all the major cities reported in OECD (2002f). Vehicles are the largest pollution source of CO, NO₂ and PM₁₀ (90.8%, 79.4% and 66.9% respectively). The continued increase in traffic congestion cost and air quality deterioration poses challenges of improving the transportation system in the capital region.

Transport infrastructure in **Mexico City** is representative of the problems that urban development without systematic integration of spatial planning and transportation system development can generate. The fact that around 83% of the total number of trips is undertaken in low capacity vehicles (cars, minibuses) is significant, particularly when combined with the sheer number of trips (over 4 million intra-metropolitan trips per day). The relative level of private car use is rather low for a major city, but this is somewhat offset by having 58.6% of the total number of single trips carried out in public transport vehicles with very low capacity, such as "minibuses" and "combis". The metro system is well-used but it is mostly based in the Federal District. While there are metro lines that extend out to heavily populated municipalities in the State of Mexico, residents in the rest of the metropolitan area must first take minibuses to terminus metro stations and then take the metro into the centre. Perhaps the most significant fact is the almost complete absence of train travel as a major form of transport, indicating a very under-developed commuter train system. Given the increasingly long distances involved as the region expands, the lack of effective train links and the reliance on relatively inefficient low capacity buses will continue to be significant handicaps for commuters. Commuting distances and travel times have increased significantly since 1987 as a result of both expansion of the urban economic area and, probably, slower traffic flows as a result of congestion. Significant differences in the quality of transport services across the metropolitan area will tend to produce disparities in terms of access to employment, levels of investment and so on, which are self-reinforcing. These changes in urban form and function that Mexico City is experiencing imply the need for significant new investment in metro-wide infrastructure.

Box 2.12. Environmental concerns in some metropolitan areas (cont.)

Accessibility problems and congestion in the **Stockholm** region are mainly due to insufficient public investment. In fact, investments in transportation remain low in Sweden overall and below the OECD average. Transportation network capacity has not kept pace with either local population growth or changes in the economy. From the 1960s to the 1990s, no major investments were made in the road network in the Stockholm region. Many of the small and medium-sized local labour market regions around Stockholm experienced in the 1990s an increasing population and an expanding economy. The more peripheral cities and labour markets in the Stockholm Mälars region often have a commuting time of one hour or more to the centre of the City of Stockholm. The fragmentation in the responsibilities for public transportations between national and local governments, and between counties is a serious obstacle to the implementation of a coherent infrastructure development policy.

In the continuing absence of comprehensive regulatory planning for the entire urban area and in particular due to poor implementation of planning laws, urban sprawl has continued in **Athens** since before World War II. The settlements which sprang up outside the planned areas were in due course integrated into the official city plan. This a *posteriori* process resulted in a mixture of incompatible land uses characterised by the coexistence of industrial and residential areas, high densities, lack of social amenities and green spaces, poor infrastructure facilities, particularly for mass transport, traffic congestion and air pollution. For many decades, Athens was credited with one of the lowest values of attractiveness and competitiveness indicators compared to other European metropolitan areas. Since the mid-1990s, however, major changes have and continue to occur which are substantially enhancing the potential of Athens to stake its claim as a modern European metropolis. But although reform is well under way, it is not yet clear whether all opportunities for improvement will be grasped. Both positive and negative factors of change are currently at play in Athens. Some, such as higher than average levels of economic growth in Greece compared to other European countries, are contextual, but nonetheless important in reinforcing the Athenian economy; others, such as transport congestion, car use and on-street parking control or planning failure in Athens, must be tackled at the level of the urban region.

To fight against extreme pollution in the Marmara Sea and to fulfil European environmental standards as part of Turkey's negotiation process for entry into the EU, **Istanbul** needs a consistent environmental policy with a comprehensive monitoring and inspection mechanism. In Istanbul, municipalities and other authorities have not established environmental standards for industrial waste and sewage, of which there is wide deposition. Solid waste is not well managed and this damages the environment. Almost half of Turkish industry is located around the Marmara Sea, and industrial waste waters are removed without phosphate and nitrogen treatment requested by EU directives. In particular, there is a need to remove phosphorus deposits. In order to fulfill EU directives on the environment Istanbul needs new investments of EUR 60 billion.

Source: OECD (2006d), *OECD Territorial Reviews: Stockholm, Sweden*, OECD publications, Paris, France; OECD (2005e), *OECD Territorial Reviews: Mexico City, Mexico*, OECD publications, Paris, France; OECD (2004a), *OECD Territorial Reviews: Athens, Greece*, OECD publications, Paris, France; OECD (2005f), *OECD Territorial Reviews: Seoul, Korea*, OECD publications, Paris, France; and OECD (forthcoming a), *OECD Territorial Reviews: Istanbul, Turkey*, OECD publications, Paris, France.

process of suburbanisation, traffic congestion in the capital region was aggravated with the explosive growth of private automobile use between Seoul City and the suburban ring. This situation may have even deteriorated with the additional loss of roads resulting from the initial Restoration Project. The government comprehensively restructured the bus system in 2004. Both physical infrastructure and institutional governance were remodelled to make bus routes more direct and to simplify the fare system. Although it may be too early to evaluate the environmental and economic impact of the reform, a significant shift from private to public transportation modes is expected gradually to take place.

Good transport infrastructure policy can also help assure balanced economic development across a region. Melbourne is an example of a metro-region where the transportation, distribution and logistics services industries are themselves an important aspect of economic activity. The port industry is a unique and complex business operating, but also impacting simultaneously, on inland, coastal and marine environments. The port economy is characterised by the great range, diversity and volume of traffic, and linkages with firms throughout the state of Victoria and beyond. Inter-modal integration and development of access roads and rail links are a priority if the potential gains are to be maximised. In such cases, consideration should be given to developing inland ports, central places where freight could be handled via rail, and which can be sited in areas where there is already some indication for localisation of industries. Inland ports can also alleviate pressure in central urban areas of such cities, and are compatible with efforts to improve the movement of road freight around the city.

An increased supply of infrastructure itself is not sufficient for long-term effective transportation management. A multi-nodal approach, favouring the development of mixed-use areas with many transport options, can help guide investment in ways that can increase public transport usage. Improvements to rail links with other regional cities give people more options about where to work and to live, creating larger functional labour markets while preserving the essential characteristics of a polycentric, networked region. But all the proposed policies and strategies may not work if the incentives are not right. Road pricing, or urban congestion charges as introduced in some cities (including London), for example, could deliver further opportunities for efficient transport management. What is necessary is to ensure the quality and efficient management of transportation, ensuring the freedom of people to travel without creating negative externalities. Changes in travel behaviour associated with the objective of increasing the proportion of people using public transport, walking, biking, etc., will only happen if the alternatives to the private car are made attractive, and are linked to changes in land use and the provision of affordable housing. In the Randstad-Holland region for

instance, the introduction of a road pricing system has long been debated and will not be introduced before 2012, at least. There are some doubts that this will have much effect on congestion unless there are convenient alternatives to the use of the main arterial roads. Everything needs to be seen in network terms, and the integration of different forms of public transport is crucial. For instance, most train users travel to the station on a bicycle, but there are limited secure facilities for bikes at stations and insufficient coordination of bus timetables at the other end. The same point applies to cars: there are limited parking places, thus not facilitating the combined use of cars and public transport (OECD, forthcoming b).

A major change in recent years that has transformed living conditions in many cities, several of them parts of metro-regions, has been the *re-emergence of inner cities* as desirable places to live, thanks in part to entrepreneurial property development and in part to major public projects of rejuvenation. Development strategies build on the interest in places captured by the construction of new, dramatic museums and cultural facilities designed by world-famous architects in depressed areas in cities such as Glasgow, Bilbao, Cleveland and Kitakyushu. Events such as the Olympic Games or World Cup often play a catalyst role in revitalisation programmes for city centres as part of an integrative economic development strategy. The Unification of the Archaeological Sites project, hotel upgrading, improved transport and the Athens 2004 Culture Programme, had coincided with the Athens 2004 Olympic Games. Istanbul is taking similar advantage of its designation as European Capital of Culture in 2010 (Box 2.13). While European cities have usually sustained important historic centres and have rarely experienced the decay of central areas familiar in US cities, many of them have also benefited from these major new projects. The theory behind these developments, particularly those based on iconic buildings and cultural features, is fully compatible with the idea of the learning city: by providing a context for social interaction, and above all, by supporting large labour markets, cities should be able to nurture an environment in which tacit knowledge can circulate. They might in particular enable cities lacking a strong historical identity to attract creative and innovative populations. Whether this strategy is really effective in achieving these goals will be a matter for evaluation in future research.

An increasing number of cities and regions pursue a strategy of territorial branding to associate their area with specific high-quality products or approaches. In the case of many traditional products, particularly food, wine, and some types of clothing, a place name is often formally included in the name of the product (Champagne is probably the most famous example.) Similar, though probably less deeply rooted, associations can be promoted for more modern products and for larger areas like metro-regions (Silicon Valley is an example, where rather than the product taking its name from the place,

Box 2.13. Urban regeneration based on cultural assets: the cases of Athens and Istanbul

Athens, as a capital city with an important cultural heritage, has a strong asset base which it is seeking to ameliorate in order to capture its real potential. It has long been realised that Athens was a means to getting to other places in Greece and not a destination itself. Various interventions have created a new opportunity but the process is in its infancy and will require sustained efforts to fully establish the city as an international tourist destination in and of itself. Progress is being made, as the Programme of Unification of the Archaeological Sites shows. All the main archaeological sites and monuments of the capital will be presented as an extended archaeological park which, united by a broad network of pedestrian routes, will be incorporated into the historic centre of the city (Plaka, Psirri, Theseio) and the downtown commercial area. The Programme as a whole involves some 60 major or minor interventions across a geographical area which more or less coincides with the traditional centre of Athens. The archaeological sites and the monuments of Athens are of great value and importance for visitors and residents contributing to the historical and contemporary local identity. Several benefits can be identified from historical preservation and more specifically from the implementation of the Unification of the Archaeological Sites project with respect to the development potential of the area and to the upgrading of the quality of life. Positive impacts for the environment will result from direct (i.e., construction of pavements, increase of open/green spaces) and indirect interventions (improvement of road network, increase of average speed, decrease in the emission of air pollutants and noise pollution). The intention is to create a network of public spaces, cultural venues, open spaces, amenities and recreational areas which will link the major cultural landmarks of the capital and integrate them into the everyday life of the city.

Authorities in Turkey plan to make use of the designation of **Istanbul** as “2010 European Capital of Culture” to launch a re-grading programme and attract 10 million tourists to the city, making use of co-operation between local administration and non-governmental organisations. Private initiative has already overseen the construction of the Formula 1 Istanbul Racing Circuit, with the city first hosting Formula 1 racing in 2005. Istanbul’s future in terms of its sustainable development requires restructuring the central functional areas of the city, protection of natural resources and historical city centres as well as rehabilitation and transformation of the urban structure on the basis of the legal framework of EU legislation. Particularly after the Marmara earthquake of 17 August 1999, studies made of current housing stocks have shown that the problem lies not in the amount of available housing but in its quality. Local authorities have focused on planning these renewal projects in two types of area. The first is the city centre and the historical urban structure – those areas where global demand is highest and which carry the potential of satisfying the conditions for the city to be globally and economically competitive. The second area of activity involves the regions of low-quality housing areas and squatter settlements, where the aim is to create healthy and modern conditions.

Source: OECD (2004a), *OECD Territorial Reviews: Athens, Greece*, OECD publications, Paris, France and OECD (forthcoming a), *OECD Territorial Reviews: Istanbul, Turkey*, OECD publications, Paris, France.

the dominant material of the production process has become the unofficial name of the area). Territorial branding associates a place with a successful range of products, advancing the reputation of the place; and it also becomes a marketing tool of firms in the sector concerned that they can boast of their place of origin. Firms, local trade associations and local authorities can combine to produce territorial branding strategies. These need to involve, not simply the production of logos, but specialised local facilities for the sector – for example, technical college courses, or museums relating it to the region. Again, these developments are most likely to take place in smaller, strongly specialised locations than metro-regions. Strategic vision at the metro-regional level needs to be aware of existing and potential territorial brands *within* the wider area, which implies a general willingness of other places within the region to accept the special character of these locations and not to seek to lose them within the wider whole. Tourism is often at the heart of territorial branding, especially when this concept can be expanded to include such elements as hosting conventions and displaying local culture (Box 2.14).

Box 2.14. **Strategies for territorial branding: the example of Busan**

The tourism industry has been widely identified as one of the most promising next-generation economic bases for regional development in **Busan**. The second largest metropolitan area in Korea intends to benefit from its strategic location as a crossroads and a gateway to Pacific and Northeast Asia to develop a “trademark image”. The objective is to develop an integrated strategy for tourism and branding in order to move away from its austere image as an industrial port-city and be seen as a modern maritime city. Busan is already endowed with the nationally very popular Haeundae Beach and other natural assets. Because there are nevertheless inevitable limits to physical or hardware elements, Busan would be well-inspired to invest more in software elements, i.e., thematic events and festivals. For example, building on the assets of the port city, one of the niches that Busan could cultivate is “thematic tourism”, mainly maritime tourism including cruises, yachting and bathing activities, but also other activities related to typical local assets such as the increasingly wide-known Busan International Film Festival, beauty surgery holidays connected with hot springs and historical tours around the 1 000-year old Gaya Dynasty. A promising option would be to connect tourism with other aspects, notably convention tourism. The institutions of Busan’s urban governance already effectively undergird this strategy since city administration has integrated tourism, culture and conventions within the same department.

Source: OECD (2004b), *OECD Territorial Reviews: Busan, Korea*, OECD publications, Paris, France.

Attractiveness is also a major component of a strategy to attract FDI. There is clearly a problem here: while firms may demand a high-quality environment and advanced infrastructures, they may be deterred by the high taxation that is needed to sustain these qualities, as these will raise their costs of production. At the same time, there is recent evidence, particularly from the Nordic countries, that taxation is not so important to inward investors at the high added value of activities, if they find in return a good infrastructure (Jensen, 2006; Kiser, 2001; and Campbell, 2004). For firms at this end of the market, the ability to attract staff and the efficiencies that flow from certain elements of infrastructure may well outweigh added taxation costs. However, in the light of the widely perceived risk, governments often strive to keep taxes as low as possible in areas where they are trying to encourage business investment. In some cases, particularly in emerging economies, they have explicitly introduced special enterprise zones where inward investors pay little or no tax. An example among the OECD metro-regions is Busan. In some countries a distinction is made between different kinds of such zones. For example, in Istanbul there are “industrial zones” and “free zones”.¹⁴ In many cases of special enterprise zones, either little or no infrastructure will be provided, or the rest of the country subsidises activities in the zone. Experience of the OECD metro-regions project would caution against extensive use of policies of this kind, whether or not they concern specially designated zones. First, particularly where low taxation has been used to encourage inward investment, there is a risk that the investors may at some stage withdraw, leaving little behind of lasting benefit in exchange for the fiscal privileges they have received. Second, activities that are willing to accept poor-quality infrastructures are likely to be down-market activities, not seeking high overall efficiencies or to attract highly skilled labour to live and work in the area.

2.4.2. Social cohesion

Particular problems are posed by the social exclusion and loss of cohesion that follow the creation of socially segregated zones of poor people, often immigrants or ethnic minorities. There are two, related, aspects to the issue. First, given the growing disparities between rich parts of the world and those that still have massive problems of poverty, there are very strong incentives for people living in the latter to move to the former. Legal barriers to immigration and the poor opportunities that probably face them if their immigration is successful, do not outweigh the advance in living standards that they might expect to find. While these immigrants sometimes move into rural areas (as with North Africans moving into southern Italy or Spain), these immigrations most often concentrate on big cities, metro-regions, as it is here that the typical low-productivity jobs available in urban agglomerations will

be found, often in the shadow economy. This links with the second factor, mentioned in Chapter 1: the tendency for metro-regions to develop both these kinds of employment as well as the high-income activities associated with advanced services and the knowledge economy. Successful cities therefore become sites for extreme inequality, leading to some areas becoming trapped in more general criminality. In recent years London, Paris, Rotterdam in the Randstad-Holland region and other less prominent cities have seen major eruptions of social disorder rooted in tensions, some but not all of them ethnically and culturally related. The last EU Urban Audit confirms similar trends and advances the hypothesis that disparities within a given city have largely surpassed disparities between cities. It also concludes on the fact that most immigrants cluster in cities, particularly in large cities, and on the strong link between urban poverty and ethnic origin (foreign born and immigrant citizens).

It is apparent from major cities across the OECD that metro-wide economic growth depends not only on economic interdependencies but also on social cohesion, for which policies have to be designed. In other words, areas that are detached from the economy and labour market of the metro-region constitute a drag factor that reduces the competitiveness of the region as a whole. For these reasons, metro-regional economic and social development policies need to be elements of a single coherent strategy. Very frequently it is economic dynamism itself that creates this detachment and lack of cohesion. For example, cities which have faced strong industrial restructuring processes, like port cities such as Rotterdam, have experienced rapid losses of many basic port-related industries in the 1980s, contributing to significantly increasing social cohesion problems in the area, in particular for ethnic minorities with little education. Dynamism produces losers as well as winners, such as those whose skills are made redundant by sectoral change.¹⁵ Further, dynamic areas attract population from other parts of a country or from other countries, who often have difficulty in adapting to a new life and making social connections. Public authorities with responsibilities across a metro-region or large parts of it cannot avoid responsibility for people and areas and people either left behind by change or having difficulty adapting to it, as they constitute parts of their overall constituencies.

Different policy approaches have been experimented to tackle urban poverty and spatial polarisation within metropolitan areas. An instance can be taken from Mexico City, where, as elsewhere, the problems are metropolitan-wide, but the solutions are often top-down and organised according to political jurisdictions (OECD, 2005e). There, the federal government launched the Habitat programme in 2003 that intends to improve public infrastructures and services in nearly 60 cities. A more integrated approach that will include other social measures is currently being developed.

In France, there has been an attempt to reduce the social isolation of these areas (mainly through large urban renovation projects) and to attract economic activity to them (mainly through the “urban free zone” policy). However, it has proven very difficult to link the two objectives – social cohesion and economic development – in a single comprehensive policy package led by a single ministry (Box 2.15).

Viewed differently, areas and populations left behind by economic change constitute resources for development in the next stage of growth, as they are clearly not fulfilling the full potential of their contribution to the region.¹⁶ This indicates a need for redevelopment programmes to move beyond city-centre projects to encompass hitherto excluded districts and populations. The large numbers of people employed in low-productivity urban services, often in the informal sector, constitute a similar resource. Their work makes a contribution to the urban environment, which would benefit if it was performed at higher levels of skill. This indicates a need for good-quality technical colleges and similar institutions providing lower-level skills, and not just advanced high-tech education, in metro-regions and for other strategies for improving the quality of the whole labour force.¹⁷ There is also a need for creative policies to bring activities currently embedded in the shadow economy into normality (Burroni and Crouch, 2006). US experience demonstrates that local business leaders often see opportunities to work alongside local authorities in tackling this wide range of issues.¹⁸

Particular difficulties are experienced by immigrants from social contexts and cultures very different from their country of arrival, though the importance of at least some groups of these to the economies of dynamic areas is widely recognised. Declining birth rates in wealthier countries (especially in Europe), combined with good technical and scientific education in India, China and many other parts of the developing world, means that employers in the former countries increasingly look to the latter for talented young people to work in high-tech sectors. (In many cases these often return to their country of origin after a number of years, helping to diffuse advanced scientific and corporate practices.) These immigrants are often able to live in the wealthier cosmopolitan districts typically found in dynamic metro-regions, protecting them from some of the difficulties typical of immigrant life. However, in cities and countries with reputations for prejudice and discrimination this may not be enough to protect from all negative experiences, which may limit the ability of cities so located to attract them in the first place.

More problematic is the situation of the large numbers of poor immigrants and their descendants, large numbers of whom live in nearly all metro-regions. So long as extreme disparities exist in living conditions between these regions and the third world people will come to seek better

Box 2.15. **Fighting urban poverty and distressed neighbourhoods in Mexico and France**

The Mexican federal policy in urban areas

Recognising the need to foster the fight against urban poverty, the *Habitat* programme, launched by the federal government in 2003 was essentially designed to combine federal and local budgetary resources to finance physical infrastructure (streets pavement, construction of sidewalks, expansions of networks for water, drainage and electricity, and also building of community centres, day-care centres for the elderly, shelters for victims of family violence, etc.), in well defined zones (poligons) within cities, that concentrate large shares of urban poverty.

A more coherent and integrated approach to urban poverty alleviation has recently been launched to complement the existing *Habitat* programme with other types of poverty alleviation measures and better involvement of local actors. The *SUMA con Habitat* programme seeks to articulate the objectives of social policies with those of territorial and urban development in a framework that includes all regional and local government actors and joint funding responsibilities between federal, state and municipal governments, as well as private investors. More specifically, the new programme will combine existing measures to improve physical and social infrastructure and public services delivery with subsidies or income transfers for poor households for basic consumption of private goods (food, healthcare, etc.), as well as more long term policy actions such as basic education and labour training for adults, financial supports to small businesses and self employment and other types of measures to support capital accumulation (family dwellings, etc.). In terms of implementation, innovative governance mechanisms would be developed to secure both horizontal co-ordination among programs from different sectoral authorities and vertical collaboration between different levels of government that have distinct responsibilities at the local, regional or national levels. A particular focus would be put on providing adequate schemes of social participation around the design, monitoring and evaluation of the programs. Two surveys will be conducted, at the beginning and at the end of the pilot test, to assess the impacts of this co-ordinated strategy and compare its effectiveness (impacts) relative to those obtained in other local contexts where policy interventions are not integral and are not co-ordinated.

French policies for urban distressed areas: the city contract and Urban Free Zones policies

Until the 1970s, France's urban policy goals were essentially quantitative. They sought to promote the construction of as much housing as possible. This approach led, to some extent, to problems of spatial segregation which had to be addressed in the 1980s with targeted initiatives. In some areas these took the form of new infrastructure and social and environmental measures (rehabilitation of large estates, neighbourhood social development). The rationale behind urban policy today is to progress beyond merely renovating problem neighbourhoods and, using comprehensive development plans, foster genuine social and urban development in these "disadvantaged" areas that are home to 5 million people. As a result of the French urban policy – territory-based and contractual

Box 2.15. **Fighting urban poverty and distressed neighbourhoods in Mexico and France** (cont.)

initiative – specific procedures have been developed since the 1990s leading to the creation of: 247 city contracts for the 2000-2006 period, 751 sensitive urban zones (ZUS), 416 urban revitalisation zones (ZRU) and 85 urban free enterprises zones (ZFU).

City contracts (which reflect a commitment on the part of one or more local and central authorities to jointly implement a multi-annual programme, designed to deal with the most disadvantaged neighbourhoods areas at urban area or municipal level) were introduced under the 1993 Urban Revival Plan, with the aim of promoting a comprehensive strategy rather than the previous sector-specific policy. City contracts are first and foremost viewed as contributing to urban social development. More than 1 300 neighbourhoods and 6 million inhabitants are now benefiting from the initiatives introduced under the 247 city contracts.¹

The urban “free zones” (ZFUs). The 1996 Urban Revival Pact (1996-1998), introduced as part of a programme of affirmative action on behalf of specific urban areas in difficulty, was a more significant effort to tackle their disadvantages from an economic perspective. In particular, it set up the mechanism of the urban “free zones” (ZFUs). The 44 ZFUs (0.8 million inhabitants in 1999) were designated by decree by the *Conseil État*, “taking account of the factors that will attract enterprises or foster the development of economic activity”. The principle is to offer reductions in taxes and social contributions to businesses that set up in these zones and recruit at least 20% of their personnel from those living in the ZFU (or in other sensitive urban zones (ZUS) in the same urban area).

Several reports give a favourable assessment of this policy, in terms of enterprise and job creation and of achievements in terms of investment.² They also emphasise the technical problems involved in precisely gauging the specific impact or cost-effectiveness of the attendant tax and social exemption measures. However, it should be noted that the latest enterprises to set up in the ZFUs are most often concentrated on the edges of the zones, because of the lack of sites available in the more central districts. It is therefore on the periphery of these areas that economic development is the most marked, and the impact of the ZFUs on the more central areas is limited.

The generally favourable assessment of the first generation of ZFUs prompted the government in 2003 to give the current list of 44 free zones a five-year extension and broaden the scheme further. As from 1 January 2004, a regime of tax and social exemptions for 41 new free zones was created under the framework law of 1 August 2003 on urban renewal. It grants 5-year tax exemptions to small enterprises with fewer than 50 employees that set up business in ZUS districts, provided that one-third of the jobs created go to people living in problem neighbourhoods in the larger urban area. Opinion remains divided about their value. According to one study by Ernst and Young, the average cost of tax and social exemptions for one job in a ZFU (whether created, transferred or already existing) ranges from FF 33 753 (EUR 5 158) to FF 44 832 (EUR 6 838). However, the ability of ZFUs to create jobs in the long term is regularly questioned. To date, urban policy has not markedly closed the gap in development and inequality between the ZUS areas and the rest of the country.

Box 2.15. Fighting urban poverty and distressed neighbourhoods in Mexico and France (cont.)

In addition, an urban renovation program, comprising 52 major city projects (GPV), three of which are located in the overseas territories, and 70 urban renewal operations that will soon be extended to over 165 sites has been launched. To complement its action, the government has created recently the National Urban Renovation Agency, a public corporation that allocates substantial grants to local communities planning to carry out urban renovation projects. A far-reaching five year nationwide urban renewal program has been launched to improve housing and environmental conditions in priority areas. It includes the building of 200 000 new subsidized rental housing units, the rehabilitation of 200 000 rental housing units, the demolition of the same number of run-down housing units and a program to rehabilitate common areas.

1. Following criticism of the earlier programme of *grands projets urbains* (GPUs) a programme of 110 more numerous and ambitious city projects and urban renewal schemes designed as an integral part of city contracts was introduced in 2001. These seek, among other things, to promote social revitalisation and upgrading, in order to restore the economic value of the areas. They include schemes to introduce public and community services, make certain districts less isolated and incorporate them into the urban area (improving transport, improving the distribution of urban functions across the area) and breathing new life into the economy (reinforcing the existing fabric, assisting local people with business creation).
2. Including the report to Parliament by the Minister for cities in July 2001, the urban policy report by the Audit Office in 2002 and the information report by the Senate Commission for Economic Affairs and Planning in July 2002.

Source: OECD (2006a), *OECD Territorial Reviews: France*, OECD publications, Paris, France; OECD (2005e), *OECD Territorial Reviews: Mexico City, Mexico*, OECD publications, Paris, France and OECD (forthcoming b).

lives, legally or illegally. With the exception of the special groups mentioned above, their labour market position is usually weak, their unemployment rates typically being higher than those of the rest of the population. They lack connections to informal and community sources of support within local institutions, except those within their own communities, which can lead to ghettos and social exclusion. They also often lack access to publicly provided social support, either because they lack citizenship entitlements or because services are not geared to their specific needs. As the *OECD Territorial Review of Stockholm* showed, even a welfare state as strong as the Swedish one is inadequate for immigrants' needs. New and innovative public policies at urban level are clearly needed, as recent examples from Stockholm show (Box 2.16).

Most city and national authorities accept some responsibilities for tackling these issues, but rarely is their political will to devote resources adequate to the challenges posed, while the cultural cleavages that develop can sometimes reach a point where simple material redistributive policies cease to address the issues as they are redefined. This can in turn lead to major problems of governance, as will be discussed in Chapter 3. Only those

Box 2.16. Policies for integrating immigrants into the labour market in Stockholm

Sweden has invested heavily in programmes aimed at integrating immigrants and is one of the only countries in the world where immigrants are entitled to social assistance immediately upon arrival. However, better immigrant labour market integration requires a paradigm shift from a model of assistance and entitlement to a model that recognises the social, cultural and economic value that comes from diversity. Tackling discrimination, forging partnerships with the private sector for programmes aimed at immigrants and creating incentives for early labour market participation need to be part of this paradigm shift.

The Swedish government has taken several useful steps to promote better labour market integration of foreign-born workers. Sweden has increased protection against discrimination in employment such as the Act of 1 July 2003. In 2004, Sweden established a foreign diploma equivalency and validation board. This measure should assist immigrants upon arrival to find employment that matches their qualifications. Vocational training in fields where there are labour shortages has also been offered to skilled foreign-born workers who hold jobs for which they are overqualified. One successful programme facilitating labour market entry is the Job Centre Southwest in the Skärholmen district in the Stockholm County. This Skärholmen model has generated national and international interest because the number of households receiving social welfare benefits has dropped by half since the program started six years ago, the best results of any Local District Council in Stockholm. However, it has been reported that this experience has provided short-term solutions, with some people coming back to unemployment in some cases after six months. The Kista Matching is another example of an area that offers an opportunity to move forward on the issues of integration and inclusion. The area's robust business sector and concentration of immigrant and ethnic minority residents makes possible a unique synergy between business development and an under-utilised labour force. However, housing in the area is segregated and local residents have relatively high rates of unemployment. Services, for example those provided by the Kista Science City Information Centre (*Motesplats*), have focused on labour market, such as improved placement services and career enhancement.

To improve coherence and co-ordination of actions among central government and the municipalities, county councils and regions, Sweden launched in 1998 a Metropolitan Policy aiming to “end the social, ethnic and discriminatory segregation in the metropolitan areas and to work for equal and comparable living conditions for people living in the cities”. The initiative focuses on 24 housing districts in the three major urban areas reaching 250 000 individuals. The main policy tools for achieving these objectives are the local development agreements (LDAs) elaborated by the state, the municipalities and the districts but implemented primarily by municipalities. First evaluations of the programme suggest success increasing employment rates and reducing benefit dependency. Tangible results in reducing segregation, a phenomena based on a complex set of issues, have not yet been observed despite improved neighbourhood conditions. Furthermore, there are still several distressed districts within the Stockholm Mälars region that have not benefited from LDAs, including those located in Västerås and Uppsala.

Source: OECD (2006d), *OECD Territorial Reviews: Stockholm, Sweden*, OECD publications, Paris, France.

authorities that are able to tackle emerging problems of major urban inequalities while they remain defined in material terms stand a chance of avoiding future crises of cultural as well as social exclusion and hostility that are far more difficult to confront.

2.4.3. Summary: dilemma III

The challenges to liveability presented by large urban agglomerations are well known, but there are also strong associations between economically successful metro-regions and high-quality environments, which policy-makers need to grasp. The attractiveness of a city or region has economic relevance at a number of points. One relates to branding the area, whether in order to associate its characteristic products with a desirable image or to attract inward investment. Further, both existing and inwardly investing firms in the advanced sectors identified as characteristic of successful metro-regions are competing strongly for skilled workers, who want to live in attractive environments with good public services and urban infrastructure. Although metro-regions face particular environmental problems, their advantages of scale are also positive elements for many aspects of sustainability, such as the development of energy-efficient public transport.

Given that metro-regions attract both the most highly skilled and rewarded workers and large numbers of people in either low-income work or living on the margins of urban society, they are frequently highly unequal. Some of these inequalities take a geographical form, with different parts of the population being segregated in parts of the region with strongly contrasted environments. Such characteristics are associated with many indicators of lack of cohesion, with a number of negative consequences. Those planning renovations and improvements in different parts of metro-regions need to be aware of implications of this kind of their projects.

Gains will accrue to regions that are proactive in creating liveable cities, rather than wait until a problem has already appeared. Because economic dynamism is driven by the market, while public policy has to deal with its externalities as these appear, the latter will usually trail behind. It is important that urban governance structures are able to break out of this trap, as problems are often far more difficult and expensive to resolve after they have developed than when they could have been prevented. Delayed investment in transport networks imposes years of congestion costs, while ghettos of poor housing are almost impossible to eradicate once they have developed without massive disruption to people's lives that causes new problems.

The positive and negative aspects of metro-regions are closely related to each other, requiring new forms of urban governance if the former are to

dominate. In the knowledge-based economy, highly qualified professionals can choose where to live from among different cities on the basis of their appearance, lifestyle and ambience. From this perspective, quality of design and more efficient use of infrastructure become critical in an overall strategy for competitiveness. A more sustainable approach to the uses of space, to infrastructures and to buildings seeks to enhance the assets – and hence the liveability and attractiveness – of particular cities. The growth of inner-city residential populations, which seemed utopian ten years ago, is now a commercial reality in a number of cities. These spaces should provide a context for social interaction nurturing an environment in which tacit knowledge can circulate.

Notes

1. See, for example the studies of Silicon Valley in Kenney (2000) and Saxenian (1994).
2. Initiatives for a Competitive Inner City (ICIC) (2001), *UK City Growth Strategies (CGS)*, (examples) available at www.plymouthgrowth.org.uk/documents/executive-summary.pdf.
3. (Plymouth), www.citygrowthsthelens.com/.
4. (St Helens), <http://gmp3.polestar.demo.eibs.co.uk/EasySite/lib/serveDocument.asp?doc=3594&pgid=1014> (Nottingham), and www.northlondon.org.uk/2/index.asp?id=130&page=business.
5. Initiatives for a Competitive Inner City (ICIC) and the City of Louisville (2001), “The West Louisville Competitive Assessment and Strategy Project: Creating Jobs, Income and Wealth in the Inner City”, available at www.icic.org.
6. The Initiative for a Competitive Milwaukee (ICM), available at www.isc.hbs.edu/pdf/ICM_FinalReport_v2.pdf.
7. Metropolitan Area Planning Council (2004), *2004 Comprehensive Economic Development Strategy*, Boston, Massachusetts.
Initiatives for a Competitive Inner City (ICIC) (2005), “Initiative for a Competitive Greater Reading” (ICGR), available at www.icic.org.
1. Biotech Region Munich (1997), Bio^M available at www.bio-m.de/web/index.php4?sx=b2.0.0&lg=en.
2. Bavarian State Government (1998), *Software-Offensive Bavaria*, available at www.software-offensive-bayern.de/english.xml.
3. Blin and Cohen (1977), Campbell (1972) and (1975), Czamanski (1971), Dahal and Dalum (2001), Feser and Bergman (2000), Munnich et al. (1996), Porter (2000), San Diego Association of Governments (2000).
4. Austrian (2000), Stough (2002), Stimson and Roberts (1997).
5. Kilkenny, Nalbarte and Besser (1999), Kilkenny and Nalbarte (2000), Rosenfeld et al. (2000).

6. Jacobs (1969), Henderson, Kuncoro and Turner (1995), Romer (1986), Barro and Sala-i-Martin (1991).
7. This concept is discussed in detail in the paper by Crouch in Part II.
8. An account is given in the paper by Lawton-Smith in Part II.
9. Available at www.sba.gov/advo/stats/sbfaq.pdf.
10. Data here refer to the year 2000 based on a former Metropolitan Database including 66 metro-regions with 2 million and more inhabitants (OECD, 2005e).
11. See NTV/MSNBC (2002) at www.ntv.com.tr/news/144050.asp.
12. Results from the Istanbul Chamber of Commerce's (ITO) survey show there are 5 500 African immigrants in Istanbul, half of them working as street vendors.
13. www.iclei.org/.
14. In the former the municipality provides infrastructure and also some reduction in energy costs, but not tax exemption. In free zones there is tax exemption, but only exporters can benefit from this. The main aim of a free zone is to promote exports, and of the industrial zone to promote specialisation in industrial production.
15. See Turok paper in Part II.
16. See Jacquier paper in Part II.
17. See Gordon and Turok papers in Part II.
18. See Pastor in Part II.

Bibliography

- Acs, Z.J. and D.B. Audretsch (1988), "Innovation in Large and Small Firms: An Empirical Analysis", *American Economic Review*, 78, 4, pp. 678-690.
- Acs, Z.J. and D.B. Audretsch (1990), *Innovation and Small Firms*, MIT Press, Cambridge.
- AEBR (Association of European Border Regions) (2001), *Transeuropean Co-operation between Territorial Authorities. New Challenges and Future Steps Necessary to Improve Co-operation*, www.aebr.net/publikationen/pdfs/territorialauthorities_01.en.pdf.
- Anderson, James and Liam O'Dowd (1999), "Borders, Border Regions and Territoriality: Contradictory Meanings, Changing Significance", *Regional Studies*, Vol. 33, 7, pp. 593-604.
- Andersson, T. et al. (2004), *The Cluster Policies Whitebook 2004*, The International Organisation for Knowledge Economy and Enterprise Development (IKED), Malmö, Sweden.
- Arnott, Richard (2004), "Does the Henry George Theorem Provide a Practical Guide to Optimal City Size", *The American Journal of Economics and Sociology*, Vol. 63, No. 5, pp. 1 057-1 090, November.
- Asheim, B.T. and M.S. Gertler (2005), "Regional Innovation Systems and the Geographical Foundations of Innovation", in J. Fagerberg., D. Mowery and R. Nelson (eds.), *The Oxford Handbook of Innovation*, Oxford University Press, Oxford.
- Atkinson, R. (2000), "Urban Economic Prospects in the Knowledge Economy", paper presented to the "CEO for Cities" Conference, Progressive Policy Institute, available at www.ceosforcities.org/research/2000/urban_economic_prospects/urban_economic_prospects.pdf.
- Austrian, Z. (2000), "Cluster Case Studies: the Marriage of Quantitative and Qualitative Information for Action", *Economic Development Quarterly*, 14, 1, pp. 97-100.
- Australian Bureau of Statistics Survey 2005.
- Auswärtiges AMT (1997), *Das Karlsruher Übereinkommen. Wegweiser für grenzüberschreitende Zusammenarbeit*, www.auswaertiges-amt.de/www/de/infoservice/download/pdf/publikationen/Karls.pdf.
- Bailey, N. and I. Turkok (2001), "Central Scotland as a Polycentric Urban Region: Useful Planning Concept or Chimera?", *Urban Studies*, 38, pp. 697-715.
- Barro, R.J. and X. Sala-i-Martin (1991), "Convergence across States and Regions", *Brookings Papers Economic Activity*, No. 1, pp. 107-158.
- Batten, D.F. (1995), "Network Cities: Creative Urban Agglomerations for the 21st Century", *Urban Studies*, 32, pp. 313-327.
- Benneworth, P.S. and D.R. Charles (2003), "Overcoming Learning Uncertainties in the Innovation Process: The Contribution of Clustering to Firms' Innovation

- Performance” in R. Oahey, W. Daring and S. Kauser (eds.), *New Technology Based Firms in the New Millennium*, Vol. 3, Pergamon, London.
- Berg, L.V.D., E. Braun, and W.V. Winden (2001), “Growth Clusters in European Cities: an Integral Approach”, *Urban Studies*, Vol. 38, No. 1, pp. 185-205.
- Bergman, E.M. and E.J. Feser (2002), “Industrial and Regional Clusters: Concepts and Comparative Applications”, available at www.rrl.wvu.edu/WebBook/Bergman-Feser/chapter2.htm.
- Bertinelli L. and D. Black (2004), “Urbanization and Growth”, *Journal of Urban Economics*, 56, 1, pp. 80-96.
- Bird R. and E. Slack (2004), *Fiscal Aspects of Metropolitan Governance*, www.mgmt.utoronto.ca/iib/ITPO401.pdf.
- Blin, J. and C. Cohen (1977), “Upgrading of Industry Clusters and Foreign Investment”, *International Studies of Management and Organization*, 30, 2, pp. 93-113.
- Biotech Region Munich (1997), BioM available at www.bio-m.de/web/index.php4?sx=b2.0.0.&lg=en.
- Burroni, L. and C. Crouch (2006), “The Governance of the Shadow Economy”, (unpublished manuscript).
- Burton, I. (1963), “A Restatement of the Dispersed City Hypothesis”, *Annals of the Association of American Geographers*, 63, pp. 285-289.
- Camagni, R. and C. Salone (1993), “Network Urban Structures in Northern Italy: Elements for a Theoretical Framework”, *Urban Studies*, 30, pp. 1053-1064.
- Campbell, J. (1972), “Growth Pole Theory, Digraph Analysis and the Interindustry Relationships”, *Tijdschrift Voor Economie en Social Geografie*, 62, pp. 69-87.
- Campbell, J. (1975), “Application of Graph Theoretic Analysis to Interindustry Relationships”, *Regional Science and Urban Economics*, 5, pp. 91-106.
- Campbell, J. (2004), *Institutional Change and Globalization*, Princeton University Press, Princeton.
- Casteigts, Michel (2003), “Enjeux et limites de la coopération transfrontière”, *Territoires 2020*, No. 7, pp. 75-84.
- Choi, Byung-Dae (n.d.), “Experiences and Lesson in Administrative Reform – Restructuring”, *Organization and Manpower in SMG*, Hanyang University, pp. 19-20.
- Church, Andrew and Peter Reid (1996), “Urban Power, International Networks and Competition: The Example of Cross-border Cooperation”, *Urban Studies*, Vol. 33, No. 8, pp. 1297-1318.
- Church, Andrew and Peter Reid (1999), “Cross-border Co-operation, Institutionalization and Political Space across the English Channel”, *Regional Studies*, Vol. 33:7, pp. 643-655.
- City of Ottawa (2002), *Innovation Ottawa: a Strategy for Sustaining Economic Generators*, available at www.ocri.ca/about/assets/export_plan.pdf.
- City of San Diego (2002), *Community and Economic Development Strategy (FY 2002-2004)*, available at www.sandiego.gov/economic-development/contacts/pdf/cedstrategy.pdf.
- City of Toronto (2005), *2004 Financial Annual Report*, 29 April 2005.
- Collin J.-P., J. Léveillé, C. Poitras (2002), “New Challenges and Old Solutions: Metropolitan Re-organisation in Canadian and US City-Regions”, *Journal of Urban Affairs*, Vol. 24, No. 3, pp. 317-332.

- Commission on Metropolitan Areas (2005), "Metropolitan Policy in Sweden", www.storstad.gov.se/english/index.htm.
- Cooke, P. (2004), "Life Sciences Clusters and Regional Policy", *Urban Studies*, 41, 5/6, pp. 1113-1131.
- Cortright, J. and H. Mayer (2002), "Signs of Life: the Growth of Biotechnology Centers in the US", Brookings Institution Center on Urban and Metropolitan Policy.
- Czamanski, S. (1971), "Some Empirical Evidence of the Strengths of Linkages between Groups of Related Industries in Urban-Regional Complexes", *Papers of the Regional Science Association*.
- Dahl, M.S. and B. Dalum (2001), "The ICT Cluster in Denmark" *Innovative Clusters*, Chapter 4, OECD publications, Paris.
- Dahlberg, Matz, Eva Mörk and Hanna Agren (2005), "On the Size of Political Jurisdictions: Preference Matching in Local Governments", Department of Economics, Uppsala University (unpublished paper).
- DATAR, (1999), *Pour une métropolisation raisonnée: diagnostic socio-économique de l'Île-de-France et du bassin parisien*, La Documentation Française, Paris.
- Dielmenan, F. M. and A. Faludi (1998), "Polynucleated Metropolitan Regions in Northwest Europe: Theme of the Special Issue", *European Planning Studies*, 6, pp. 365-377.
- DTI (UK Department of Trade and Industry) (2003), A Practical Guide to Cluster Development, available at www.dti.gov.uk/files/file14008.pdf?pubpdfload=03%2F1397.
- Dümmler and Thierstein (2002), "The European Metropolitan Region of Zurich – A Cluster of Economic Clusters?", paper presented at the 42nd ERSA Conference, 29 August 2002, Dortmund.
- Dunning, J.H. (1998), "Location and the Multinational Enterprise", *Journal of International Business Studies*, 29, pp. 45-66.
- Duranton, Gilles and Diego Puga (1999), "Diversity and Specialisation in Cities: Why, Where and When Does it Matter?", *Research Papers in Environmental and Spatial Analysis*, No. 56, Department Environment, London School of Economics, www.lse.ac.uk/collections/geographyAndEnvironment/research/Researchpapers/rp56.pdf.
- Duranton, Gilles and Diego Puga (2000), "Diversity and Specialisation in Cities: Why, Where and When does it Matter?", *Journal of Urban Studies*, Vol. 37, No. 3, pp. 533-555.
- Enright, M.J. (1996), "Regional Clusters and Economic Development: A Research Agenda", in U.H. Staber et al. (eds.), *Business Networks: Prospects for Regional Development*, Walter de Gruyter, Berlin.
- ESPON (European Spatial Planning Observation Network) (2005), Annex report C, "Governing Polycentricity", *Potentials for Polycentric Development in Europe*, March 2005, ESPON, Stockholm.
- European Commission (2003), "European Trend Chart on Innovation", Thematic Report-Cluster Policies, (covering period up to March 2003), available at http://trendchart.cordis.lu/reports/documents/TR_clusters_03_1.pdf.
- European Commission (2004), "Cities and the Lisbon Agenda: Assessing the Performance of Cities", the Urban Audit, http://ec.europa.eu/regional_policy/index_en.htm.
- European Economic and Social Council (2004), Opinion on the subject of European metropolitan areas and their socio-economic impact, EESC, July 2004.

- Euroregion (2001), "Pro Europa Viadrina", Gemeinschaftsinitiative INTERREG – Rückblick auf die Jahre 1995 bis 1999 und Perspektiven, <http://ffonet.han-solo.net/euroregion/downloads/Rueckblick1995-1999.pdf>.
- Ferrara, Walter and Paolo Pasi (eds.) (2000), "Come funzionano le euroregioni", *Esplorazione in sette casi*, I.S.I.G., Gorizia.
- Feser, E.J. and E.M. Bergman (2000), "National Industry Cluster Templates: a Framework for Applied Regional Cluster", *Regional Studies*, 34, 1, pp. 1-19.
- Ffowcs-Williams, I. (2000), "Policy for Inter-firm Networking and Clustering: a Practitioner's Perspective", prepared for the OECD/Italian Ministry of Industry Bologna Conference for Ministers Responsible for SMEs and Industry Ministers on "Enhancing the Competitiveness of SMEs in the Global Economy: Strategies and Policies", 13-15 June, available at www.competitiveness.org/filemanager/download/593/OECD%20Bologna%20May%2000%20E4.pdf.
- Flatters, Henderson and Mieszkowski (1974a), "Optimum City Size: The External Diseconomy Question", *Journal of Political Economy* (1974), 82, pp. 373-388. An essay, "Externality Policies and City Size", based upon this article is published in J. Gardner, P. Graves, and G. Tolley (eds.) (1979), *Urban Growth Policy in a Market Economy*, Academic Press, New York.
- Flatters, Henderson and Mieszkowski (1974b), "Public Goods, Efficiency, and Regional Fiscal Equalization", *Journal of Public Economics*, 3, pp. 99-112.
- Florida, R. (2002), *The Rise of the Creative Class and How It's Transforming Work, Leisure, Community and Everyday Life*, Basic Books, New York.
- Freire and Polèse (2003), *Connecting Cities with Macroeconomic Concerns: The Missing Link*, The World Bank, Washington, D.C., p. 124.
- Fujita, M. and R. Ishii (1998), "Global Location Behavior and Organizational Dynamics of Japanese Electronics Firms and their Impact on Regional Economies", in Alfred D. Chandler Jr., Peter Hagström, and Örjan Sölvell (eds.), *The Dynamic Firm: The Role of Technology, Strategy, Organization and Regions*, Oxford University Press, Oxford, pp. 167-216.
- Giordano, B. and E. Roller (2003), "A Comparison of City Region Dynamics in the UK, Spain and Italy: More Similarities than Differences?", *Regional Studies*, 37, pp. 911-927.
- Gotthmann, J. (1961), *Megalopolis, The Urbanized Northeastern Seaboard of the United States*, The Twentieth Century Fund, New York.
- Greater Phoenix Economic Council (2002), *Turning Point: New Choices for the Future*, available at www.greaterphoenix.net/work/files/Pocketsummary.pdf.
- Hall, P. (2001), "Global City-Regions in the Twenty-First Century" in A. Scott (ed.), *Global City Regions: Trends, Theory and Policy*, Oxford University Press Inc., New York.
- Henderson, Vernon (1997), "Medium Size Cities", *Regional Science and Urban Economics*, 27, pp. 583-612.
- Henderson, V, A. Kuncoro and M. Turner (1995), "Industrial Development in Cities", *Journal of Political Economy*, Vol. 103, No. 5, pp. 1067-1090.
- Hirschman, Albert O., (1958), *The Strategy of Economic Development*, Yale University Press, New Haven.
- Högfeldt, P. (2004), "The History and Politics of Corporate Ownership in Sweden", available at www.nber.org/books/corp-owner03/hogfeldt6-30-04.pdf.

- Houlberg, Kurt (2000), "Kommunale stordriftsfordele – hvor finder vi dem, og hvor store er de?, København", AKF Forlaget.
- IKED (International Organization for Knowledge Economy and Enterprise Development), (2005), "Enabling Growth and Innovation for SMEs Proceedings from IKED/INSME", available at www.iked.org/pdf/IKED_INSME.pdf.
- Inoue, H. (2003), "Activating Industrial Clusters – On-The-Spot Experience", available at www.rieti.go.jp/users/cluster-seminar/pdf/005_p.pdf.
- Isaksen, A. and E. Hauge (2002), *Regional Clusters in Europe*, European Commission, Observatory of European SMEs, 2002/3, Office of Official Publications of the European Communities, Luxembourg.
- Jacobs, J. (1969), *The Economy of Cities*, Random House, New York.
- Jacobs, J. (1985), *Cities and the Wealth of Nations: Principles of Economic Life*, Viking, Harmondsworth.
- Jensen, Nathan M. (2006), *Nation-States and the Multinational Corporation: A Political Economy of Direct Foreign Investment*, Princeton University Press, Princeton.
- Jong Kon Chin, S. (2006), "Scientific Communities and the Birth of New Industries", PhD thesis, European University Institute, Florence.
- Kaldor, N. (1967), *Strategic Factors in Economic Development*, New York State School of Industrial and Labour Relations, Cornell University, Ithaca, New York.
- Kenney, M. (ed.) (2000), *Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region*, Stanford University Press, Stanford.
- Ketels, C. (2003), "The Development of the Cluster Concept – Present Experiences and Further Developments", available at www.isc.hbs.edu/pdf/Frontiers_of_Cluster_Research_2003.11.23.pdf.
- Kilkenny, M., L. Nalbarte, and T. Beser (1999), "Reciprocated Community Support and Small-Town, Small-Business Success", *Entrepreneurship and Regional Development*, 11, pp. 231-246.
- Kilkenny, M., and L. Nalbarte (2000), "Keystone Sector Identification", TVA Rural Studies Program.
- Kiser, E. (2001), "Have We Over-estimated the Effects of Neoliberalism and Globalization?", in J. Campbell and O. Pedersen (eds.), *The Rise of Neoliberalism and Institutional Analysis*, Princeton University Press, Princeton.
- Kloosterman, R.C. and B. Lambregts (2001), "Clustering of Economic Activities in Polycentric Urban Regions: The Case of the Randstad", *Urban Studies*, Vol. 38, No. 4, pp. 717-732.
- Krugman, P.R. (1991), "Cities in Space: Three Simple Models", NBER Working Papers 3607, National Bureau of Economic Research, Inc.
- Krugman, P.R. (1992), "Geography and Trade", The MIT Press, Cambridge, MA.
- Krugman, P.R., A.J. Venables and M. Fujita (1999), *The Spatial Economy*, The MIT Press, Cambridge MA.
- Kübler, D. and H. Heinel (2005), *Metropolitan Governance, Capacity, Democracy and the Dynamics of Place*, Routledge, London and New York.

- Laurila, T. (2005), "Innovation Strategy Process in the Helsinki Region", Baltic Sea Region Micro/Nano Technologies Seminar, available at www.fmnt.fi/berlin/Lectures/Laurila.pdf.
- Le Galès, P. (2004), *European Cities*, Oxford University Press, Oxford.
- Lefevre, Christian (2006), *Comparative Analysis of Metropolitan Governance in City-Regions*, paper presented at the "Metropolitan Areas for City-Regions and Medium-sized Cities", International Workshop, OECD-Region of Galicia, 30-31 March, Santiago de Compostella.
- Lefevre (2004), "The Governability of Metropolitan areas: International Experiences and Lessons for Latin America", Report for the Inter-American Bank for Development, February.
- Lundvall, B.-A. and S. Borras (1998), *The Globalizing Learning Economy: Implications for Innovation Policy*, Office of Official Publications of the European Communities, Luxembourg.
- Lukkarinen, Margita (2004), "Local Development Agreements as a Tool to Stop Segregation in Vulnerable Metropolitan Areas: the Main Elements of the Policy", Peer Review in the Field of Social Inclusion Policies, European Commission, DG Employment and Social Affairs.
- Martin, R. and P. Sunley (2003), "Deconstructing Clusters: Chaotic Concept or Policy Panacea?", *Journal of Economic Geography*, 3, pp. 5-35.
- Meijers, Evert (2005), "Polycentric Urban Regions and the Quest for Synergy: Is a Network of Cities More Than the Sum of the Parts?", *Urban Studies*, Vol. 42, No. 4, April, pp. 765-781.
- Merriman, Ohkawara and Suzuki (1995), "Excess Commuting in the Tokyo Metropolitan Area: Measurement and Policy Simulations", *Urban Studies*, Vol. 32, No. 1, 1 February.
- Metropolitan Community of Montreal (2003), "Charting Our International Future: Building a Competitive, Attractive, Independent and Responsible Community", available at www.cmm.qc.ca/vision2025/vision2025_enonce_en.pdf.
- Metropolitan Community of Montreal (2005), "Charting Our International Future: A Competitive Metropolitan Montreal Region", Economic Development Plan (February), www.cmm.qc.ca/pde/documents/pde05_english.pdf.
- Mévellec, A. (2002), "De la coopération intercommunale à la coopération métropolitaine: Changement de paradigme dans l'aménagement du territoire à la française?", paper for the conference "Governance and Spatial Discontinuities: Reterritorialization or a New Polarization of Metropolitan Spaces?", INRS-Urbanisation, 24-25 April 2006, Montréal.
- Moeller, Inge Lene and Niels Joergen Mau Pedersen (2001), "Economies of Scale in Local Governments – Theoretical and Empirical Investigations of Danish Municipalities", paper for the 57th Congress of International Institute of Public Finance, August 2001, Linz, Austria.
- Munnich, L.W. et al. (1996), "Southeastern Minnesota Industrial Cluster Study", joint project by the Initiative Fund of Southeastern and South Central Minnesota and the State and Local Policy Program, September.
- Myrdal, G. (1957), *Economic Theory and Under-Developed Regions*, Duckworth, London.

- Newark Alliance (2004), *Opportunity Newark: Jobs and Community Development for the 21st Century*, available at www.opportunitynewark.com/default.aspx.
- Newman, Peter and Gilles Verpraet (1999), "The Impacts of Partnership on Urban Governance: Conclusions from Recent European Research", *Regional Studies*, Vol. 33, No. 5, July, pp. 487-491.
- Newton, K. (1982), "Is Small Really so Beautiful? Is Big Really so Ugly? Size, Effectiveness and Democracy in Local Government", *Political Studies*, 30, pp. 190-206.
- ODPM (Office of the Deputy Prime Minister) (2004a), "Competitive European Cities: Where Do the Core Cities Stand?", www.communities.gov.uk/pub/441/CompetitiveEuropeanCitiesWheredotheCoreCitiesStandFullReportPDF444Kb_id1127441.pdf.
- ODPM (Office of the Deputy Prime Minister) (2004b), "Our Cities Are Back: Competitive Cities Make Prosperous Regions", <http://siteresources.worldbank.org/INTLED/Resources/339650-1105473440091/CitiesareBackDec04UK.pdf>.
- ODPM (Office of the Deputy Prime Minister) (2006), "A Framework for City Regions", London, www.communities.gov.uk/pub/588/AFrameworkforCityRegionsResearchReportPDF814Kb_id1163588.pdf.
- OECD (1998), *Integrating Urban Distressed Areas*, OECD publications, Paris, France.
- OECD (2001a), *Cities and Regions in the New Learning Economy*, OECD publications, Paris, France.
- OECD (2001b), *OECD Territorial Reviews: Hungary*, OECD publications, Paris, France.
- OECD (2001c), *OECD Territorial Reviews: Korea*, OECD publications, Paris, France.
- OECD (2002a), *OECD Territorial Reviews: Canada*, OECD publications, Paris, France.
- OECD (2002b), *OECD Territorial Reviews: Champagne-Ardenne, France*, OECD publications, Paris, France.
- OECD (2002c), *OECD Territorial Reviews: Switzerland*, OECD publications, Paris, France.
- OECD (2003a), *OECD Territorial Reviews: Helsinki, Finland*, OECD publications, Paris, France.
- OECD (2003b), *OECD Territorial Reviews: Metropolitan Melbourne, Australia*, OECD publications, Paris, France.
- OECD (2003c), *OECD Territorial Reviews: Öresund, Denmark/Sweden*, OECD publications, Paris, France.
- OECD (2003d), *OECD Territorial Reviews: Vienna-Bratislava, Austria/Slovak Republic*, OECD publications, Paris, France.
- OECD (2004a), *OECD Territorial Reviews: Athens, Greece*, OECD publications, Paris, France.
- OECD (2004b), *OECD Territorial Reviews: Busan, Korea*, OECD publications, Paris, France.
- OECD (2004c), *OECD Territorial Reviews: Montreal, Canada*, OECD publications, Paris, France.
- OECD (2005a), *Building Competitive Regions: Strategies and Governance*, OECD publications, Paris, France.
- OECD (2005b), *OECD Factbook 2005*, OECD publications, Paris, France.
- OECD (2005c), *OECD Territorial Reviews: Finland*, OECD publications, Paris, France.
- OECD (2005d), *OECD Territorial Reviews: Japan*, OECD publications, Paris, France.

- OECD (2005e), *OECD Territorial Reviews: Mexico City, Mexico*, OECD publications, Paris, France.
- OECD (2005f), *OECD Territorial Reviews: Seoul, Korea*, OECD publications, Paris, France.
- OECD (2005g), *Regions at a Glance 2005*, OECD publications, Paris, France.
- OECD (2006a), *OECD Territorial Reviews: France*, OECD publications, Paris, France.
- OECD (2006b), *OECD Territorial Reviews: Milan, Italy*, OECD publications, Paris, France.
- OECD (2006c), *OECD Territorial Reviews: Newcastle, United Kingdom*, OECD publications, Paris, France.
- OECD (2006d), *OECD Territorial Reviews: Stockholm, Sweden*, OECD publications, Paris, France.
- OECD (forthcoming a), *OECD Territorial Reviews: Istanbul, Turkey*, OECD publications, Paris, France.
- OECD (forthcoming b), *OECD Territorial Reviews: Randstad-Holland, The Netherlands*, OECD publications, Paris, France.
- OECD (forthcoming c), *Spatial Development and Infrastructure*, OECD publications, Paris, France.
- Pinson, G., (2006), "Strategic Planning: Vector or Substitute for Metropolitan Integration: Lessons from Italy", paper for the conference "Governance and Spatial Discontinuities: Reterritorialization or a New Polarization of Metropolitan Spaces?", INRS-Urbanisation, 24-25 April, Montreal.
- Perkmann, Markus (1999), "Building Governance Institutions Across European Borders", *Regional Studies*, Vol. 33:7, pp. 657-667.
- Polèse, M. (2005), "Cities and National Economic Growth: A Reappraisal", *Urban Studies*, 42, 8, pp. 1429-1451.
- Porter, M. (1990), *The Competitive Advantage of Nations*, Basic Books, New York.
- Porter, M. (2000a), "Cluster Mapping Project", Harvard Institute for Strategy and Competitiveness, <https://secure.hbs.edu/isc/index.jsp>.
- Porter, M. (2000b), "Location, Competition, and Economic Development: Local Clusters in a Global Economy", *Economic Development Quarterly*, Vol. 14, No. 1, pp. 15-34.
- Porter, M. (2002), "District of Columbia: Profile of the State Economy", available at www.isc.hbs.edu/district_of_colubia_02-26-02.pdf.
- Power, D. and M. Lundmark (2004), "Working through Knowledge Pools: Labour Market Dynamics, the Transference of Knowledge and Ideas, and Industrial Clusters", *Urban Studies*, 41, 5/6, pp. 1025-1044.
- Prud'homme, Rémy (1996), "Managing Megacities", *Le courrier du CNRS*, No. 82, pp. 174-176.
- Raines, P. (ed.) (2002), *Cluster Development and Policy*, Ashgate, Aldershot.
- Rasmussen, J. (2003), European Seminar on Cluster Policy – Workshop 2: National Policies, 10 June, available at www.ebst.dk/file/4233/cluster_rasmussen.pdf.
- Ratti, Remigio (1993), "Spatial and Economic Effects of Frontiers: Overview of Traditional and New Approaches and Theories of Border Area Development", in Remigio Ratti and Shalom Reichmann (eds.), *Theory and Practice of Transborder Cooperation*, Helbing and Lichtenbahn, Basel/Frankfurt A.M.

- Rodriguez Alvarez, J.M. (2002), "Madrid, le pilotage politique par la région", in B. Jouve et C. Lefèvre (dir.), *Métropoles ingouvernables*, Elsevier, Paris.
- Roelandt, T.J.A. and P.D. Hertog (eds.) (1999), *Boosting Innovation, the Cluster Approach*, OECD Proceedings, OECD, Paris.
- Romein, Arie (2004), "Spatial Planning in Competitive Polycentric Urban Regions: Some Practical Lessons from Northwest Europe", OTB Research Institute for Housing, Urban and Mobility Studies, Delft University of Technology, paper submitted to City Futures Conference, 8-10 July 2004, Chicago, IL.
- Romer, P.M. (1986), "Increasing Returns and Long-Run Growth", *Journal of Political Economy*, Vol. 94, 15, pp. 1002-1037.
- Rosenfeld, S. et al. (2000), "Clusters in Rural Areas: Auto Supply Chains in Tennessee and Houseboat Manufacturers in Kentucky", TVE Rural Studies Program.
- Rosenfeld, S. (1998), "Technical Colleges, Technology Deployment, and Regional Development", draft stock-taking paper prepared for the OECD, available at www.rtsinc.org/publications/OECD6%2098%20doc%20copy.pdf.
- San Diego Association of Governments, *Industry Clusters*, retrieved on 2 May 2000, from www.sdrta.org/.
- Sassen, S. (2006), *Territory, Authority, Rights: From Medieval to Global Assemblages*, Princeton University Press.
- Sassen, S. (2003), Keynote Speech at international conference on Technology Clusters, 7-8 November, Montreal, (conference highlights prepared by Manon Bourgeois and Mireille Brochu).
- Sassen (1991), *The Global City: New York, London, Tokyo*, Princeton University Press, 1991, 1st ed.
- Savitch and Vogel (2000), "Paths to New Regionalism", *State and Local Government Review*, Vol. 32, pp. 158-168.
- Saxenian, A.-L. (1994), *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*, Harvard University Press, Cambridge, MA.
- Scott, A. (2004), "Cultural-Products Industries and Urban Economic Development: Prospects for Growth and Market Contestation in Global Context", *Urban Affairs Review*, Vol. 39, No. 4, March, pp. 461-490.
- Scott, A. (eds.) (2001), *Global City Regions: Trends, Theory and Policy*, Oxford University Press Inc., New York.
- Scott, James Wesley (1999), "European and North American Contexts for Cross-border Regionalism", *Regional Studies*, Vol. 33:7, pp. 605-617.
- Simmie, Sennett and Wood (2002), "Innovation in Europe: A Tale of Knowledge and Trade in Five Cities", *Regional Studies*, Vol. 36:1, pp. 47-64.
- Stiglitz, J. (1977), "The Theory of Local Public Goods" in M. Feldstein and R. Inman (eds.), *The Economics of Public Service*, Macmillan Press, London.
- Stimson, R.J., R.R. Stough and B. Roberts (2002), *Regional Economic Development: Analysis and Planning Strategy*, Springer, New York.
- Storper, M. (1997), *The Regional World: Territorial Development in a Global Economy*, Guilford Press, New York.

- Storper, M. (1997), "Regional Economies as Relational Assets", available at www.lse.ac.uk/collections/geographyAndEnvironment/whosWho/profiles/storper/pdf/RegEcRelAssets.pdf.
- Swann, G.M.P., M. Prevezer and D. Stout (1998), *The Dynamics of Industrial Clustering: International Comparisons in Computing and Biotechnology*, Oxford University Press, Oxford.
- Swiss Federal Council (2001), "Politique des agglomérations de la Confédération", Report of the Federal Council of 19 December 2001.
- Taylor, P.J. and D.R.F. Walker (2004), "Urban Hinterworlds Revisited", *Geography*, 89, 2, pp. 145-151.
- The Commonwealth of Massachusetts Executive Department (2003), Press Release (February 13, 2003), "Romney Targets Job Growth through Regional Councils: Business, community and education leaders work together to bolster economic activity", Boston, MA, www.isc.hbs.edu/pdf/MA_RCC_press_release.pdf.
- Tiebout, Charles, (1956), "A Pure Theory of Local Public Expenditures", *Journal of Political Economy*, 64, pp. 416-424.
- United Nations (1998), "World Urbanization Prospects: The 1996 Revision", United Nations, New York, US, Small Business Administration (2005), survey report, available at www.sba.gov/advo/stats/sbfaq.pdf.
- United Nations (2004), "World Urbanization Prospects: The 2003 Revision", *Department of Economic and Social Affairs, Population Division*, www.un.org/esa/population/publications/wup2003/WUP2003.htm.
- The Commonwealth of Massachusetts Executive Department (2003), "Romney Targets Job Growth through Regional Councils: Business, Community, and Education Leaders Work Together to Bolster Economic Activity", press release, 13 February 2003, Boston, MA, www.isc.hbs.edu/pdf/MA_RCC_press_release.pdf.
- Navarro, Carmen and Tomàs Fornes Mariona (2002), "Madrid and Barcelona Metropolitan Areas in Comparative Perspective", paper for the conference "Governance and Spatial Discontinuities: Reterritorialization or a New Polarization of Metropolitan Spaces?" INRS-Urbanisation, 24-25 April 2006, Montreal, www.vrm.ca/documents/Carmen_Navarro.pdf.
- Walter-Rogg, Melanie (2006), "Metropolitan Governance Reform in Germany", paper for the conference "Governance and Spatial Discontinuities: Reterritorialization or a New Polarization of Metropolitan Spaces?" INRS-Urbanisation, 24-25 April 2006, Montreal, www.vrm.ca/documents/Montreal2006_Working_Paper_Walter_Rogg_Sojer.pdf.
- Westin, L. and A. Osthol (1994), "Functional Networks, Infrastructure and Regional Mobilization", in L. Lundqvist and O. Persson (eds.), *Northern Perspectives on European Integration*, nordREFO, Stockholm, pp. 43-57.
- Winden, W.V. and L.V. D. Berg (2004), "Cities in the Knowledge Economy: New Governance Challenges", Euricur Discussion Paper (European Institute for Comparative Urban Research), Rotterdam, the Netherlands.
- Wyatt, W. (1998), "Research Study on Competences", available at www.watsonwyatt.com/research/resrender.asp?id=W-99&page=3.

Bibliography

- Aaker, D. (1996), *Building Strong Brands*, The Free Press, New York.
- Alesina, A. and A. Drazen (1991), "Why are Stabilizations Delayed?", *American Economic Review*, 81, No. 5 (December).
- Allison, J. (2005), "Exodus or Renaissance? Metropolitan Migration in the Late 1990s", *Town Planning Review*, 76, 2, pp. 167-189.
- Andrews, M., W. Duncombe and J. Yinger (2002), "Revisiting Economies of Size in Education: Are We Any Closer to a Consensus?", *Economics of Education Review*, 21: pp. 245-262.
- Angel, D. P. (1991), "High-Technology Agglomeration and the Labour Market: The Case of Silicon Valley", *Environment and Planning, A*, 23, pp. 1 501-1 516.
- Aniello, V. (2002), *Mezzogiorno Revisitato: I Distretti Competitivi in Campania*, Edizioni Scientifiche Italiane, Naples.
- ARS (Alliance for Regional Stewardship) (2003), *Inclusive Stewardship: Emerging Collaborations between Neighbourhoods and Regions*, Alliance for Regional Stewardship, Denver, CO.
- ARS (2004), *Regional Business Civic Organisations: Creating New Agendas for Metropolitan Competitiveness*, Alliance for Regional Stewardship, Denver, CO.
- Bachtler, J. (2004), "Innovation-led Regional Development: Policy Trends and Issues", paper presented at the OECD conference on "Innovation and Regional Development: Transition Towards a Knowledge-based Economy", 25-26 November 2004, Florence, Italy (unpublished).
- Bagnasco, A. (1977), *Tre Italie: la problematica territoriale dello sviluppo italiano*, Il Mulino, Bologna.
- Barnes, W. and L.C. Ledebur (1998), *The New Regional Economies: The US Common Market and the Global Economy*, Sage Publications, Thousand Oaks, CA.
- Baumann, A. (2002), "Convergence versus Path-Dependency: Vocational Training in the Media Production Industries in Germany and the UK", PhD thesis, European University Institute, Florence.
- Beaumont, J-R et al. (2003), "Urban Policy In The Netherlands", pp. 119-137, in P. De Decker, J. Vranken, J. Beaumont, I. Van Nieuwenhuize (eds.), *On The Origin Of Urban Development Programmes*, Garant, Antwerp/Apeldoorn, p. 195.
- Beaumont, J-R and I. Van Nieuwenhuize (eds.) (2003), *On the Origin of Urban Development Programmes*, Garant, Antwerp/Apeldoorn, p. 195.
- Beauregard, R. A. (2004) "The Resilience of US Cities: Decline and Resurgence in the 20th Century", paper presented to Leverhulme International Symposium on "The Resurgent City", London School of Economics, available from: www.lse.ac.uk/collections/resurgentCity/Papers/Opening_plenary/robertabeauregard.pdf.

- Becattini, G. (1987), *Mercato e forze locali: il distretto industriale*, Il Mulino, Bologna.
- Bell, D. (1973), *The Coming of Post-Industrial Society: A Venture in Social Forecasting*, Basic Books, New York.
- Bennett, R. and S. Savani (2003), "The Rebranding of City Places: An International Comparative Investigation", *International Public Management Review*, 4(2), pp. 70-87.
- van den Berg, L., P.M.J. Pol, W. van Winden and P. Woets (2004), *European Cities in the Knowledge Economy: The Cases of Amsterdam, Dortmund, Eindhoven, Helsinki, Manchester, Munich, Münster, Rotterdam and Zaragoza*, Euricur, Rotterdam.
- Berry, B.J.L. (1964), "Cities as Systems within Systems of Cities", *Papers of the Regional Science Association*, 13, 147-163.
- Birdsall, N. and J.L. Londoño (1997), "Asset Inequality Matters: An Assessment of the World Bank's Approach to Poverty Reduction", *American Economic Review*, Vol. 87, No. 2 (AEA Papers and Proceedings), pp. 32-37.
- Blackwell, A. G., and R. Fox (2004), "Regional Equity and Smart Growth: Opportunities for Advancing Social and Economic Justice in America", *Funders' Network for Smart Growth and Liveable Communities*, Translation Paper 1, Edition 2, Coral Gables, Florida.
- Boddy, M. (ed.) (2003), *Urban Transformation and Urban Governance: Shaping the Competitive City of the Future*, Policy Press, Bristol.
- Boddy, M., C. Lambert, S. French and I. Smith (1999), "Bristol Business Survey", Working Paper 6, ESRC Cities Programme, University of Bristol.
- Boston Consulting Group (1998), "The Business Case for Pursuing Retail Opportunities in the Inner City", available at www.icic.org.
- Boyer, R. (1986), *La Théorie de la Régulation: Une Analyse Critique*, Algalma, Paris.
- Boadway, R. and E. Mörk (2004), "Division of Powers", in Per Molander (ed.), *Fiscal Federalism in Unitary States*, Kluwer Academic Publishers, Dordrecht, NL.
- Brunello, G. and F. Gambarotto (2004), "Agglomeration Effects on Employer-Provided Training: Evidence from the UK", *IZA Working Paper 1055*, Institute for the Study of Labour (IZA), Bonn.
- Brunello, G. and M. De Paolo (2004), "Training and the Density of Economic Activity: Evidence from Italy", *IZA Working Paper 1173*, Institute for the Study of Labour (IZA), Bonn.
- Buck, N. and I.R. Gordon (2005), "Cities, Competitiveness, Cohesion and Governance – A Sketch of 'The New Conventional Wisdom'", Chapter 1, in N. Buck, I. Gordon, A. Harding and I. Turok (eds.), *Changing Cities: Rethinking Urban Competitiveness, Cohesion and Governance*, Palgrave Macmillan, Basingstoke.
- Buck, N., I.R. Gordon, P.G. Hall, M. Harloe and M. Kleinman (2002), *Working Capital: Life and Labour in Contemporary London*, Routledge, London.
- Burgess, J. (1981), "The Misunderstood City", *Landscapes*, Vol. 25.
- Burroni, L. and C. Trigilia (2001), "Italy: Economic Development through Local Economies", in Crouch et al. (2001), q.v., pp. 46-78.
- Cafaggi, F. (ed.) (2004), *Reti di imprese tra regolazione e norme sociali*, Il Mulino, Bologna.
- Camagni, R. (2002), "On the Concept of Territorial Competitiveness: Sound or Misleading?", *Urban Studies*, 39, pp. 2395-2411.

- Carlton, D.W. (1979), "Vertical Integration in Competitive Markets under Uncertainty", *Journal of Industrial Economics*, 27, pp. 189-209.
- Castells, M. (1996), *The Rise of the Network Society*, Blackwell, Cambridge, MA.
- Castells, M. (2001), "The Information City, the New Economy, and the Network Society", in A. Kasvio, V. Laitalainen, H. Salonen and P. Mero (eds.), *People, Cities and the New Information Economy*, proceedings of an International Conference in Helsinki, 14-15 December 2000, pp. 22-37.
- CEC (2004), "Innovation in Europe, Iceland and Norway: Overview of the Third Community Innovation Survey", CEC, Luxembourg, www.cordis.lu/innovation-smes/src/cis.htm.
- CEOs for Cities (2002), "Leveraging Colleges and Universities for Urban Economic Revitalisation: An Action Agenda", www.ceosforcities.org/research/2002/leveraging_colleges/.
- De Certeau, M. (1980), "L'invention du quotidien", *Arts De Faire*, 10/18, Uge, Paris.
- Chalkley, B. and S. Essex (1999), "Urban Development through Hosting International Events: A History of the Olympic Games", *Planning Perspectives*, Vol. 14, pp. 369-394.
- Chamberlin, E. (1933), *The Theory of Monopolistic Competition*, Harvard University Press, Cambridge, MA.
- Chatterton, P. and R. Unsworth (2004), "Making Space for Culture(s) in Boomtown: Some Alternative Futures for Development, Ownership and Participation in Leeds City Centre", *Local Economy*, Vol. 19, No. 4.
- Chernick, H. (1998), "Fiscal Capacity in New York: the City Versus the Region", *National Tax Journal*, 51 (September), pp. 531-540.
- Chernick, H. (2004), "Fiscal Equalisation between Swedish Municipalities", in Per Molander (ed.), *Fiscal Federalism in Unitary States*, Kluwer Academic Publishers, Dordrecht, NL.
- Cheshire, P. (1979), "Inner Areas as Spatial Labour Markets: A Critique of the Inner Area Studies", *Urban Studies*, 16, pp. 29-43.
- Cheshire, P. and I. Gordon (1998), "Territorial Competition: Some Lessons for Policy", *Annals of Regional Science*, 32, pp. 321-346.
- Christerson, B. and C. Lever-Tracy (1997), "The Third China? emerging industrial districts in rural China", *International Journal of Urban and Regional Research*, 21, pp. 569-588.
- Cooke, P., C. Davies and R. Wilson (2002), "Innovation Advantages of Cities: From Knowledge to Equity in Five Basic Steps", *European Planning Studies*, 10, pp. 2232-2250.
- Coombs, R. and S. Metcalfe (2000), "Universities, the Science Base and the Innovation Performance of the UK", CRIC Briefing Paper No. 5 November, University of Manchester and UMIST, Manchester.
- Core Cities Working Group (2004), Innovation Group Final Report, July, www.corecities.com.
- Crouch, C. (1999), *Social Change in Western Europe*, Oxford University Press, Oxford.
- Crouch, C. and H. Farrell (2001), "Great Britain: Falling through the Holes in the Network Concept", in Crouch et al., q.v., pp. 154-211.

- Crouch, C., P. Le Galès, C. Trigilia and H. Voelzkow (2001), *Local Production Systems in Europe: Rise or Demise?*, Oxford University Press, Oxford.
- Crouch, C., P. Le Galès, C. Trigilia and H. Voelzkow (2004), *Changing Governance of Local Economies: Responses of European Local Production Systems*, Oxford University Press, Oxford.
- Crouch, C. and C. Trigilia (2001), "Conclusions: Still Local Economies in Global Capitalism", in Crouch et al., q.v.
- Cumbers, A., D. Mackinnon and K. Chapman (2003), "Innovation, Collaboration and Learning in Industrial Clusters: A Study of SMEs in the Aberdeen Oil Complex", *Environment and Planning A*, 35, pp. 1 689-1 706.
- Dei Ottati, G. (2004), "Global Competition and Entrepreneurial Behaviour in Industrial Districts: Trust Relations in an Italian Industrial District", in H.-H. Hoehmann and F. Welter (eds.), *Trust and Entrepreneurship: A West-East Perspective*, Elgar, Cheltenham.
- Di Gregorio, D. and S. Shane (2003), "Why So Some Universities Generate More Start-Ups than Others?", *Research Policy*, 32, pp. 209-227.
- Docherty, I., N. Bailey and I. Turok (2001), *Central Scotland Business Survey: Initial Report*, University of Glasgow.
- Duncombe, W. and J. Yinger (2000), "Financing Higher Student Performance Standards: the Case of New York State", *Economics of Education Review*, 19, pp. 363-386.
- Duranton, G. and D. Puga (2004), "Micro Foundations of Urban Agglomeration Economies", in J.V. Henderson and J.F. Thisse (eds.), *Handbook of Regional and Urban Economics*, Vol. 4, Elsevier, Amsterdam, pp. 2065-2118.
- Duster, T. (1995), "Post Industrialisation and Youth Unemployment: African Americans as Harbingers", in K. McFate, R. Lawson and W.J. Wilson (eds.), *Poverty, Inequality and the Future of Social Policy*, Russell Sage Foundation, New York.
- Edquist, C. (1997), "Systems of Innovation Approaches – Their Emergence and Characteristics", in C. Edquist (ed.), *Systems of Innovation: Technologies, Institutions and Organisations*, Pinter, London.
- Elbing, S. (2004), "The Media Industry in Cologne and London", Volkswagen Stiftung project on "Productive Incoherences in Local Economies", unpublished paper.
- Elfring, T., and W. Hulsink (2003), "Networks in Entrepreneurship: The Case Of High-Technology Firms", *Small Business Economics*, 21, pp. 409-422.
- ERECO (The European Economic Research Consortium) (2004), *European Regional Prospects, Analysis and Forecasts to 2008*, The European Economic Research Consortium and Cambridge Econometrics.
- European Commission (1999), *Sustainable Urban Development in the European Union: A Framework for Action, Cohesion and Regional Policy*, Brussels, p. 41.
- European Commission (2001), *Second Report on Economic and Social Cohesion*, Brussels.
- Evans, G. (2003), *Cultural Planning: an Urban Renaissance*, Routledge, London.
- Fainstein, S., I. Gordon and M. Harlow (eds.) (1992), *New York and London in the Contemporary World*, Blackwell, Oxford.
- Farrell, H. and A.-L. Holten (2004), "Collective Goods in the Local Economy: The Packaging Machinery Cluster in Bologna", in Crouch et al., q.v.

- Fehr, E. and K.M. Schmidt (2004), "The Role of Equality, Efficiency, and Rawlsian Motives in Social Preferences: A Reply to Engelmann and Strobel", Working Paper No. 179, Institute for Empirical Economics, University of Zurich.
- Fielding, A.J. (1991), "Migration and Social Mobility: South East England as an Escalator Region", *Regional Studies*, 26, pp. 1-15.
- Florida, R. (2002), *The Rise of the Creative Class, and how it's Transforming Work, Leisure, Community and Everyday Life*, Basic Books, New York.
- Florida, R. (2005), *The Flight of the Creative Class*, Harper Collins, New York.
- Foster, K. (2001), *Regionalism on Purpose*, Lincoln Land Institute, Cambridge, MA.
- Friedrichs J. and J. Dangschat (1993), "Hamburg: culture and urban competition" in F. Bianchini and M. Parkinson (eds.), *Cultural Policy and Urban Regeneration: The West European Experience*, Manchester University Press, Manchester, pp. 114-34.
- Funders' Network for Smart Growth and Liveable Communities (2005), *Signs of Promise: Stories of Philanthropic Leadership in Advancing Neighbourhood and Regional Equity*, Funders' Network for Smart Growth and Liveable Communities, Coral Gables, Florida.
- FutureWorks (2003), *It Takes a Region to Raise a New Economy: How Business Leadership Is Driving Regional Prosperity*, FutureWorks, Arlington, MA, www.winwinpartner.com/downloads/080603MBNreport.pdf.
- FutureWorks (2004), *Minding Their Civic Business: A Look at the New Ways Regional Business-Civic Organisations are Making a Difference in Metropolitan North America*, FutureWorks, Arlington, MA.
- Glaeser, E. (1999), "Learning in Cities", *Journal of Urban Economics*, 46, pp. 254-277.
- Glaeser, E. and D. Marc (2001), "Cities and Skills", *Journal of Labor Economics*, 19, pp. 316-342.
- Glaeser, E. and J. Shapiro (2001), "Is There A New Urbanism? The Growth of US Cities in the 1990s", Working Paper 8 357, National Bureau of Economic Research.
- Glaeser, E. (2005), "Four Challenges for Scotland's Cities", in D. Coyle et al. (eds.), *New Wealth for Old Nations*, Princeton University Press, Princeton.
- Glassmann, U. (2004), "Refining National Policy: The Machine-Tool Industry in the Local Economy of Stuttgart", in Crouch et al., q.v., pp. 46-73.
- Glassmann, U. and H. Voelzkow (2001), "The Governance of Local Economies in Germany", in Crouch et al., q.v.
- Glasson, J (2003), "The Widening Local and Regional Development Impacts of the Modern Universities – A Tale of Two Cities" (and North-South Perspectives), *Local Economy*, 18, 1, pp. 21-37.
- Gnad, F. (2000), "Regional Promotion Strategies for the Culture Industries in the Ruhr Area", in F. Gnad and J. Siegmann (eds.), *Culture Industries in Europe: Regional Development Concepts for Private-Sector Cultural Production and Services*, Ministry for Economics and Business, Technology and Transport of the State of North Rhine-Westphalia, and the Ministry for Employment, Social Affairs and Urban Development, Culture and Sports of the State of North Rhine-Westphalia, Düsseldorf, pp. 172-177.
- Goddard, J. (2004), Keynote address to the OECD Conference on "Innovation and Regional Policy", unpublished, 25-26 November 2004, Florence, Italy.
- Gold, J. (1980), *An Introduction to Behavioural Geography*, Oxford University Press, Oxford.

- Goldsmith, B. and T. O'Regan (2005), *The Film Studio*, Rowman and Littlefield, Boulder.
- Gordon, D.L.A (1996), "Planning, Design and Managing Change in Urban Waterfront Redevelopment", *Town Planning Review*, Vol. 67, No. 3.
- Gordon, I.R. (2003), "Unemployment and Spatial Labour Markets: Strong Adjustment and Persistent Concentration", Chapter 3, in R. Martin and P. Morrison (eds.), *Geographies of Labour Market Inequality*, London, TSO, 2001.
- Gordon, I.R. (2005), "Integrating Cities", Chapter 5, in N. Buck, I. Gordon, A. Harding and I. Turok (eds.), *Changing Cities: Rethinking Urban Competitiveness, Cohesion and Governance*, Palgrave Macmillan, Basingstoke.
- Gordon, I.R. and P. McCann (2005), "Innovation, Agglomeration and Regional Development", *Journal of Economic Geography*.
- Gordon, I.R., J. Stockdale, T. Travers and C. Whitehead (2004), *London's Place in the UK Economy 2004*, Corporation of London, London.
- Gordon, I.R. and I. Turok (2005), "How Urban Labour Markets Matter", Chapter 14, in N. Buck, I. Gordon, A. Harding and I. Turok (eds.), *Changing Cities: Rethinking Urban Competitiveness, Cohesion and Governance*, Palgrave Macmillan, Basingstoke.
- Gottlieb, P.D. (2000), "The Effects of Poverty on Metropolitan Area Economic Performance", in *Urban-Suburban Interdependence: New Directions for Research and Policy*, Lincoln Institute for Land Policy, Cambridge, Massachusetts.
- Grabher, G. (2002), "Cool Projects, Boring Institutions: Temporary Collaboration in Social Context", *Regional Studies*, 36, pp. 205-214.
- Grabher, G. (2004), "Temporary Architectures of Learning: Knowledge Governance in Project Ecologies", *Organisation Studies*, 25, pp. 1 491-1 514.
- Granovetter, M.S. (1973), "The Strength of Weak Ties", *American Journal of Sociology*, pp. 1360-1380.
- Green, R.K. and S. Malpezzi (2003), *A Primer on U. S. Housing Markets and Housing Policy*, AREUEA Monograph Series No. 3, The Urban Institute Press, Washington, DC.
- Griffiths, R. (1993), "The Politics of Cultural Policy in Urban Regeneration Strategies", *Policy and Politics*, Vol. 21.
- Griffiths, R. (1995), "Cultural Strategies and New Modes of Urban Intervention", *Cities*, Vol. 12, No. 4.
- Hall, P. (1998), *Cities in Civilization*, Pantheon, New York.
- Hambleton, R. (1991), "The regeneration of US and British cities", *Local Government Studies*, September/October, pp. 53-69.
- Haughwout, A.F. (1999), "Regional Fiscal Cooperation in Metropolitan Areas: An Exploration", *Journal of Policy Analysis and Management*, 18, No. 4, Fall, pp. 579-600.
- Haughwout, A.F. (2000), "The Paradox of Infrastructure Investment: Can a Productive Good Reduce Productivity?", *Brookings Review*, 18, No. 3, Summer, pp. 38-41.
- Helsinki City Urban Facts (2004), *The Regional Economy of Helsinki from a European Perspective*, Web Publication No. 31.
- Henderson, J. W. and A.J. Scott (1987), "The Growth and Internationalisation of the American Semiconductor Industry: Labour Processes and the Changing Spatial Organisation of Production", in M.J. Breheny and R. McQuaid (eds.), *The*

- Development of High Technology Industries: An International Survey*, Croom Helm, London, pp. 37-79.
- Henderson, V. (1997), "Medium Size Cities", *Regional Science and Urban Economics*, Vol. 27, pp. 583-612.
- Henton, D., J. Melville and K. Walesh (2004), *Civic Revolutionaries: Igniting the Passion for Change in America's Communities*, Jossey-Bass, San Francisco, CA.
- Hill, E. and I. Lendel (2005), "The Competitive Effect of 9-11 on New York Compared to Other Large US Cities", Howard Chernick (ed.), *The Impact of the 9-11 Terrorist Attack on the Economy of New York City* (forthcoming), Russell Sage Press, New York.
- Hollingsworth, J.R. (2002), "On Institutional Embeddedness", in J.R. Hollingsworth, K.H. Müller and E.J. Hollingsworth (eds.), q.v.
- Hollingsworth, J.R. and R. Boyer (eds.) (1997), *Contemporary Capitalism: The Embeddedness of Institutions*, Cambridge University Press, Cambridge.
- Hollingsworth, J.R., K.H. Müller and E.J. Hollingsworth (eds.), *Advancing Socio-Economics: An Institutional Perspective*, Rowman and Littlefield, Lanham, MD.
- Hong Kong Central Policy Unit (2003), *Baseline Study on Hong Kong's Creative Industries*, Centre for Cultural Policy Research, University of Hong Kong, Hong Kong.
- Imrie, R. and H. Thomas (1993), "The Limits of Property-Led Regeneration", *Environment and Planning C: Government and Policy*, Vol. 11, London.
- Iredale, R. (2001), "The Migration of Professionals: Theories and Typologies", *International Migration*, Vol. 39, pp. 7-23.
- Jones, A. (1998), "Issues in Waterfront Regeneration: More Sobering Thoughts – a UK Perspective", *Planning Practice and Research*, Vol. 13, No. 4.
- Julier, G. (2005), "Urban Designscapes and the Production of Aesthetic Consent", *Urban Studies*, 42, 5-6, pp. 689-888.
- Keating, M. (1995), "Size, Efficiency and Democracy: Consolidation, Fragmentation and Public Choice", in D. Judge, G. Stoker and H. Wolman (ed.), *Theories of Urban Politics*, Sage, Thousand Oaks, CA.
- Kenney, M. (2000) (ed.), *Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region*, Stanford University Press, Stanford.
- Kenney, M. and R. Florida (2000), "Venture Capital in Silicon Valley: Fuelling New Firm Foundation", in Kenney (ed.), q.v., pp. 98-123.
- Kessler, J.A. (1999), "The North American Free Trade Agreement, Emerging Apparel Production Networks and Industrial Upgrading: the Southern California/Mexico Connection", *Review of International Political Economy*, 6, pp. 565-608.
- Keune, M, with J.P. Kiss and A. Toth (2004), "Innovation, Actors and Institutions: Change and Continuity in Local Development Policy in Two Hungarian Regions", *International Journal of Urban and Regional Research*, 28, 3, pp. 586-600.
- Kitchen, H. (2002), *Issues in Municipal Spending, Revenue, Governance and Management*, Canadian Tax Foundation.
- Kooiman, T. (1993), *Modern Governance*, Sage, London.
- Krugman, P. (1991), *Geography and Trade*, MIT, Cambridge, MA.

- Ladd, H.F. (1994), "Fiscal Implications of Local Population Growth: A Conceptual and Empirical Analysis", *Regional Science and Urban Economics*, 24, No. 6, December, pp. 661-686.
- Ladd, H.F. and J. Yinger (1991), *America's Ailing Cities: Fiscal Health and the Design of Urban Policy*, The Johns Hopkins University Press, Baltimore.
- Landry, C. and F. Bianchini (1995), *The Creative City*, Demos, London.
- Lawton Smith, H. (2003), "Maximising the Benefits from a Concentration of Universities", paper presented at SEEDS Conference, 11 July, the Barbican, London.
- Lee, R. (2003), "The New Urban Paradigm: A Radical Departure in City Management", *New Frontiers*, Issue 1, Centre for Development and Enterprise, Johannesburg.
- Lefevre, C. (1998), "Metropolitan Government and Governance in Western Countries: A Critical Review", *International Journal of Urban and Regional Research*, 22, pp. 9-25.
- Leprince, M. (n.d.), "Intercommunalité : une fiscalité maîtrisée?", University of Rennes, mimeo.
- Leslie, S.W. (2000), "The Biggest 'Angel' of Them All: The Military, and the Making of Silicon Valley", in Kenney (ed.), q.v., pp. 48-67.
- Lundvall, B.A. and B. Johnson (1994), "The Learning Economy", *Journal of Industrial Studies*, 1, pp. 23-42.
- McCarthy, J. and S.H.A. Pollock (1997), "Urban regeneration in Glasgow and Dundee: a comparative evaluation", *Land Use Policy*, Vol. 14, No. 2, pp. 137-149.
- McNeill, D. and A. While (2001), "The New Urban Economies", in R. Paddison (ed.), *Handbook of Urban Studies*, Sage, London.
- Marshall, A. (1919), *Industry and Trade: A Study of Industrial Technique and Business Organisation*, Macmillan, London.
- Martin, J.P. (2000), "What Works among Active Labour Market Policies: Evidence from OECD Countries' Experiences", *OECD Economic Studies*, 30.
- Maskell, P. and A. Malmberg (1999), "Localised Learning and Industrial Competitiveness", *Cambridge Journal of Economics*, 23, pp. 167-185.
- Menger, P.M. (1993), "L'hégémonie parisienne: économie et politique de la gravitation artistique", *Annales: Economies, Sociétés, Civilisations*, No. 6, pp. 1565-1600.
- Miller, R. and M. Côte (1987), *Growing the Next Silicon Valley: A Guide for Successful Regional Planning*, Lexington Books, Lexington.
- Molotch, H. (1996), "LA as Design Product: How Art Works in a Regional Economy", in A.J. Scott and E.W. Soja (eds.), *The City: Los Angeles and Urban Theory at the End of the Twentieth Century*, University of California Press, Berkeley and Los Angeles, pp. 225-275.
- Mommaas, H. (2004), "Cultural Clusters and the Post-industrial City: Towards the Remapping of Urban Cultural Policy", *Urban Studies*, Vol. 41, No. 3.
- Montgomery, S.S. and M.D. Robinson (1993), "Visual Artists in New York: What's Special about Person and Place?", *Journal of Cultural Economics*, 17, pp. 17-39.
- Muro, M. and R. Puentes (2004), "Investing in a Better Future: A Review of the Fiscal and Competitive Advantages of Smarter Growth Development Patterns", Discussion Paper, Brookings Institution Center of Urban and Metropolitan Policy.

- Nadvi, K. and H. Schmitz (1994), "Industrial Clusters in Less Developed Countries: Review of Experiences and a Research Agenda", Discussion Paper No. 339, Institute of Development Studies, Brighton.
- Nativil, C. (2002), "Upgrading the Skills of the Low-Qualified: A New Local Policy Agenda – An Exploratory Report", DT/LEED/DC(2002)5, Territorial Development Division, OECD.
- Newton, K. (1982), "Is Small Really So Beautiful? Is Big Really So Ugly? Size, Effectiveness and Democracy in Local Government", *Political Studies*, 30, pp. 190-206.
- Noteboom, B. (1999), "Innovation, Learning and Industrial Organisation", *Cambridge Journal of Economics*, 23, pp. 127-150.
- Novy, A., V. Redak, J. Jäger and A. Hamedinger (2001), "The End of Reed Vienna: Recent Ruptures and Continuities in Urban Governance", *European Urban and Regional Studies*, 8, 2, pp. 131-144.
- Nowak, J. (1997), "Neighbourhood Initiative and the Regional Economy", *Economic Development Quarterly*, Vol. 11, No. 1, February.
- Oates, W.E., E.P. Howrey and W.J. Baumol (1971), "The Analysis of Public Policy in Dynamic Urban Models", *Journal of Political Economy*, 79. No. 1, January/February, pp. 142-153.
- ODPM (2004), "Competitive European Cities: Where do the Core Cities Stand?", Office of the Deputy Prime Minister, Urban Research Paper 13, ODPM, London.
- OECD (2001), *Cities for Citizens: The Role of Metropolitan Governance*, OECD publications, Paris.
- OECD (2002), *Benchmarking Industry-Science Relationships*, OECD publications, Paris.
- OECD (2004a), *OECD Territorial Reviews: Montreal, Canada*, OECD publications, Paris, available at www.oecd.org/publications/e-book/0404011E.PDF.
- OECD (2004b), *OECD Territorial Reviews: Montreal, Canada, Annex – Comparative Regions: Minneapolis-St Paul, US; Stuttgart, Germany; Philadelphia, US*, OECD publications, Paris, available at www.oecd.org/dataoecd/27/38/27561736.pdf.
- Pack, J.R. (1995), "Poverty and Urban Public Expenditures", Working Paper No. 197, Wharton Real Estate Center, University of Pennsylvania, October.
- Pastor, M. (2001), *Widening the Winners Circle from Global Trade in Southern California*, Pacific Council on International Policy, Los Angeles, CA.
- Pastor, M., P. Dreier, E. Grigsby and M. López-Garza (2000), *Regions That Work: How Cities and Suburbs Can Grow Together*, University of Minnesota Press, Minneapolis, Minnesota.
- Pastor, M. and D. Reed (2005), "Understanding Equitable Infrastructure for California", in Ellen Hanak and Mark Baldassare (eds.), *California 2025: Taking on the Future*, Public Policy Institute of California, San Francisco.
- Patel, P. (2002), "Measuring Third Stream Activities", Final Report to the Russell Group of Universities, www.clo.cam.ac.uk/final_russell_report.pdf.
- Peck, F. and D. McGuinness (2003), "UK Competitiveness and the Regional Agenda: Making Sense of Clusters in the North of England", *Local Economy*, 18/1.
- Perroux, F. (1964), *L'économie du XX^e siècle*, Puf.
- Perroux, F. (1990), *Dictionnaire économique et social*, Hatier, Paris.

- Philo, C. and G. Kearns (1993), "Culture, History, Capital: A Critical Introduction To The Selling Of Places", in G. Kearns and C. Philo (eds.), *Selling Places: The City as Cultural Capital, Past and Present*, Pergamon Press, Oxford, pp. 1-32.
- Piore, M. and C. Sabel (1984), *The Second Industrial Divide: Possibilities for Prosperity*, Basic Books, New York.
- Piselli, F. (1999), "Capitale Sociale: Un Concetto Situazionale e Dinamico", *Stato e Mercato*, 3, pp. 395-418.
- Porter, M.E. (1990; revised 1998), *The Competitive Advantage of Nations*, The Free Press, New York.
- Porter, M.E. (1995), "The Competitive Advantage of the Inner-City", *Harvard Business Review*, May-June, pp. 55-71.
- Putnam, R.D., with R. Leonardi and R.Y. Nanetti (1993), *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press, Princeton, NJ.
- Rabin, M. (1993), "Incorporating Fairness into Game Theory and Economics", *American Economic Review*, Vol. 83, No. 5, pp. 1 281-1 302.
- Ramsey, F. (1927), "A Contribution to the Theory of Taxation", *Economic Journal*, 37, pp. 47-61.
- Reder, M.W. (1964), "Wage Structure and Structural Unemployment", *Review of Economic Studies*, 31, pp. 309-322.
- Reschovsky, A. (1980), "An Evaluation of Metropolitan Area Tax Base Sharing", *National Tax Journal*, 33, No. 1, March, pp. 55-66.
- Reschovsky, A. and J. Imazeki (2003), "Let No Child Be Left Behind: Determining the Cost of Improving Student Performance", *Public Finance Review*, 31, May, pp. 263-290.
- Rietdorf, W. (2004), "Disparitäten zwischen schrumpfenden und wachsenden Städten in Ost- und West Deutschland", in U. Mathiessen (ed.), *Stadtregion und Wissen: Analysen und Plädoyers für eine wissenschaftsbasierte Stadtpolitik*, pp. 193-222.
- Robson, B., M. Parkinson, M. Boddy and D. MacLennan (2000), *The State of English Cities*, Department of the Environment, Transport and the Regions, DETR, London.
- Rodríguez-Pose, A. (1998), *Dynamics of Regional Growth in Europe: Social and Political Factors*, Oxford University Press, Oxford.
- Rodríguez-Pose, A. (1999), "Convergence or Divergence? Types of Regional Responses to Socio-Economic Change in Western Europe", *Tijdschrift voor Economische en Sociale Geografie*, 90/4, pp. 363-378.
- Rodrik, D. (1997), *Has Globalisation Gone Too Far?*, Institute for International Economics, Washington, DC.
- Rodrik, D. (1994), "King Kong Meets Godzilla: The World Bank and The East Asian Miracle", in Albert Fishlow et al., *Miracle or Design? Lessons from the East Asian Experience*, ODC Policy Essay No. 11, Overseas Development Council, Washington, DC.
- Rosenau, J.N. (1992), "Governance, Order and Change in World Politics", in N.D. Rosenau and E.O. Czempiel (eds.), *Governance without Government*, Cambridge University Press, Cambridge.
- Rosenfeld, S.A. (1998), "Technical Colleges, Technology Deployment and Regional Development", paper presented at OECD conference on "Building Competitive

- Regional Economies: Up-grading Knowledge and Diffusing Technology to Local Firms”, 28-29 May, Modena, Italy, unpublished.
- Rosenfeld, S.A. (1992), *Competitive Manufacturing: New Strategies for Regional Development*, Centre for Urban Policy Research, Rutgers University, New Brunswick.
- Russo, M. (1985), “Technical Change and the Industrial District: The Role of Interfirm Relations in the Growth and Transformation of Ceramic Tile Production in Italy”, *Research Policy*, 14, pp. 329-343.
- Sabel, C. (1988), “Flexible Specialisation and the Re-emergence of Regional Economies”, in P. Hirst and J. Zeitlin (eds.), *Reversing Industrial Decline*, Berg, Oxford, pp. 17-70.
- Sabel, C., G. Herrigel, R. Deeg and R. Kazis (1989), “Regional Prosperities Compared: Massachusetts and Baden-Württemberg in the 1980s”, *Economy and Society*, 18, 4, pp. 374-404.
- Santagata, W. (2002), “Cultural Districts, Property Rights and Sustainable Economic Growth”, *International Journal of Urban and Regional Research*, 26, pp. 9-23.
- Sassen, S. (2001), *The Global City: New York, London, Tokyo*, new updated edition, Princeton University Press.
- Savitch, H.V., D. Collins, D. Sanders and J. Markham (1993), “Ties That Bind: Central Cities, Suburbs, and the New Metropolitan Region”, *Economic Development Quarterly*, Vol. 7, No. 4, November.
- Saxenian, A. (1994), *The Regional Advantage, Culture and Competition in Silicon Valley and Route 128*, Harvard University Press, Cambridge, MA.
- Scott, A.J. (1993), *Technopolis: High-Technology Industry and Regional Development in Southern California*, University of California Press, Berkeley.
- Scott, A.J. (1996), “The Craft, Fashion, and Cultural Products Industries of Los Angeles: Competitive Dynamics and Policy Dilemmas in a Multi-Sectoral Image-Producing Complex”, *Annals of the Association of American Geographers*, 86, pp. 306-323.
- Scott, A.J. (1998a), “Multimedia and Digital Visual Effects: An Emerging Local Labour Market”, *Monthly Labour Review*, 121, pp. 30-38.
- Scott, A.J. (1998b), *Regions and the World Economy: The Coming Shape of Global Production, Competition, and Political Order*, Oxford University Press, Oxford, New York.
- Scott, A.J. (2002), Regional Push: The Geography of Development and Growth in Low- and Middle-Income Countries, *Third World Quarterly*, 23, pp. 137-161.
- Scott, A.J. (2005a), “Entrepreneurship, Innovation and Industrial Development: Geography and the Creative Field Revisited”, *Small Business Economics*.
- Scott, A.J. (2005b), *On Hollywood: The Place, the Industry*, Princeton University Press, Princeton.
- Scott, W. R. (2001), *Institutions and Organisations*, 2nd edition, Sage, Thousand Oaks, CA.
- Seaton, A. V. (1996), “Hay on Wye, the Mouse that Roared: Book Towns and Rural Tourism”, *Tourism Management*, 17, pp. 379-382.
- Simmie, J. (ed.) (2001), *Innovative Cities*, E & F Spon, London.
- Simmie, J., J. Sennett, P. Wood and D. Hart (2002), “Innovation in Europe: A Tale of Networks, Knowledge and Trade in Five Cities”, *Regional Studies*, 36, 1, 47-64.

- Singelmann, J. (1978), *From Agriculture to Services: The Transformation of Industrial Employment*, Sage, Beverly Hills, CA.
- Soja, E.W. and A.J. Scott (1986), "Los Angeles: Capital of the Late Twentieth Century", *Environment and Planning D: Society and Space*, 4, pp. 249-254.
- Storper, M. (1997), *The Regional World: Territorial Development in a Global Economy*, Guilford Press, New York.
- Storper, M. and A.J. Scott (1995), "The Wealth of Regions: Market Forces and Policy Imperatives in Local and Global Context", *Futures*, 27, pp. 505-526.
- Sturgeon, T.J. (2000), "How Silicon Valley Came to Be", in Kenney (ed.), q.v., pp. 15-47.
- Suchman, M. C. (2000), "Dealmakers and Counselors: Law Firms as Intermediaries in the Development of Silicon Valley", in Kenney (ed.), q.v., pp. 71-97.
- Summers, A.A. and L. Jakubowski (1996), "The Fiscal Burden of Unreimbursed Poverty Expenditures in the City of Philadelphia: 1985-1995", Working Paper No. 238, Wharton Real Estate Center, University of Pennsylvania, August.
- Sunley, P., R. Martin and C. Nativel (2001), "Mapping the New Deal: Local Disparities in the Performance of Welfare-to-Work", *Transactions of the Institute of British Geographers*, 26, pp. 484-512.
- Swanstrom, T., (2001), "What We Argue About When We Argue About Regionalism", *Journal of Urban Affairs*, 23, 5, pp. 479-496.
- Thaler, R. H. (1988), "Anomalies: The Ultimatum Game", *Journal of Economic Perspectives*, Vol. 2, No. 4, pp. 195-206.
- Thorbecke, E. and C. Charumilind (2002), "Economic Inequality and Its Socioeconomic Impact", *World Development*, Vol. 30, No. 9, pp. 1 477-1 495.
- Thurow, L.C. (1972), "Education and Economic Equality", *The Public Interest*, 35, pp. 66-81.
- Travers, T. (2004), *The Politics of London Governing an Ungovernable City*, Palgrave Macmillan, Basingstoke.
- Triglia, C. (1999), "Capitale sociale e sviluppo locale", *Stato e Mercato*, 3, pp. 419-440.
- Triglia, C. (2004), "The Governance of High-Tech Districts", in Crouch et al., q.v., pp. 321-330.
- Turok, I. (1992), "Property-led urban regeneration: panacea or placebo?", *Environment and Planning A*, Vol. 24, London.
- Turok, I. and N. Bailey (2004), "Twin Track Cities: Competitiveness and Cohesion in Glasgow and Edinburgh", *Progress in Planning*, Vol. 62, 3, pp. 135-204.
- Turok, I. et al. (2005), *Social Cohesion: Patterns Trends and Processes*, State of the Cities Report, Office of the Deputy Prime Minister, London.
- Union Européenne (1997), *La Question Urbaine: Orientations Pour un Débat*.
- Union Européenne (1999a), *Schéma de Développement de l'Espace Communautaire*, Postdam, p. 94.
- Union Européenne (1999b), "Cadre d'Action Pour un Développement Urbain Durable Dans l'Union Européenne", Communication de la Commission.
- Union Européenne (2001), *Rapport 2001 sur la Compétitivité Européenne*.
- Universities UK (2002), "The University Culture of Enterprise – Knowledge Transfer across the Nation", Universities UK, London.

- Ursell, G. (2000), Television Production: Issues of Exploitation, Commodification and Subjectivity in UK Television Markets, *Media, Culture and Society*, 22, pp. 805-825.
- USHUD (US Department of Housing and Urban Development) (1999), *New Markets: The Untapped Retail Buying Power in America's Inner Cities*, USHUD, Washington, DC.
- Van Waarden, F. (2002), "Market Institutions as Communicating Vessels: Changes between Economic Coordination Principles as a Consequence of Deregulation Policies", in Hollingsworth, Müller, and Hollingsworth (eds.), q.v., pp. 171-212.
- Van Winden, W. (2003), "Essays on Urban ICT Policies", PhD thesis, Tinbergen Institute, Erasmus University Rotterdam, World Bank Group (2002), "Constructing Knowledge Societies: New Challenges for Tertiary Education", www1.worldbank.org/education/tertiary/cks.asp.
- Van Winden, W., A. Van der Meer and L. Van den Berg (2004), "The Development of ICT Clusters in European Cities: Towards a Typology", *International Journal of Technology Management*, Vol. 3/4/5/6, pp. 356-387.
- Veltz, P. (1992), *Competitiveness Policy Council*, Washington.
- Veltz, P. (1996), *Mondialisation, Villes et Territoires : l'Économie d'Archipel*, Presses Universitaires de France, Paris.
- Voith, R. (1998), "Do Suburbs Need Cities?", *Journal of Regional Science*, Vol. 38, No. 3, pp. 445-465.
- Ward, S.V. (2002), *Planning the Twentieth-Century City – The Advanced Capitalist World*, John Wiley and Sons, New Jersey.
- Warf, B. (1995), "Telecommunications and the Changing Geography of Knowledge Transmission in the Late 20th Century", *Urban Studies*, Vol. 32, 2, pp. 361-378.
- Weissbourd, R. and R. Bodini (2005), *Market-Based Community Economic Development*, Brookings Institution, Washington, DC.
- White, J. (2004), "Building a Technology Network or How to Link University Based Research with Business", presentation at the Global Connect Annual Forum, 13 December 2004, LTN, London.
- Wilkinson, R. (2000), *Mind the Gap: Hierarchies, Health and Human Evolution*, Weidenfeld and Nicolson, London.
- Wilson, W.J. (1987), *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*, University of Chicago Press, Chicago.
- Wilson, W.J. (1997), *When Work Disappears: The World of the New Urban Poor*, Knopf, New York.
- World Bank (2005), "Governance Matters IV: Governance Indicators for 1996-2004", report, Daniel Kaufmann, Aart Kraay and Massimo Mastruzzi, Washington, p. 61.
- World Commission on Environment and Development (1987), "Our common future", Brundtland Report, Oxford University Press.
- Young, S. and R. Brown (2002), "Globalisation and the Knowledge Economy", in N. Hood, J. Peat, E. Peters and S. Young (eds.), *Scotland in a Global Economy: The 20:20 Vision*, Palgrave Macmillan, Basingstoke.

Table of Contents

Part I

Competitive Cities in the Global Economy: Horizontal Synthesis Report

Executive Summary	13
Chapter 1. The Emerging Role of Metropolitan Regions	29
1.1. Introduction	30
1.2. Defining metropolitan areas	31
1.3. Urbanisation trends	36
1.4. Performance of OECD metropolitan regions	46
1.5. City size and income	50
1.6. Factors of competitiveness	55
1.6.1. Productivity is key... ..	56
1.6.2. Labour market also does contribute	63
1.7. Cities as engines of national economic growth?	63
1.8. The urban paradox	76
1.9. The dilemmas for metropolitan regions	79
Notes	82
Chapter 2. Competitiveness, Liveability and Strategic Vision	85
2.1. Introduction	86
2.2. Dilemma I: positive or negative spillovers?	87
2.2.1. The benefits of metro-regions	87
2.2.2. Negative externalities of metro-regions	91
2.2.3. Metro areas versus national growth?	93
2.2.4. Summary: dilemma I	99
2.3. Dilemma II: public strategic vision in a market context?	101
2.3.1. Why a strategic vision?	101
2.3.2. Cluster development policies	104
2.3.3. Alternative futures for non-high-tech regions	128
2.3.4. Summary: dilemma II	134
2.4. Dilemma III: Economic dynamism or liveable city?	136
2.4.1. Attractiveness and sustainability	137
2.4.2. Social cohesion	144
2.4.3. Summary: dilemma III	151
Notes	152

Chapter 3. The Governance of Metro-regions	155
3.1. Introduction	156
3.2. Dilemma IV: Appropriate scale or closeness to citizens?	157
3.2.1. Challenges and rationale for horizontal collaboration.	158
3.2.2. Main trends in horizontal co-operation within metropolitan regions	161
3.2.3. Tentative evaluation: pros and cons of the different models	190
3.2.4. Summary: dilemma IV	200
3.3. Dilemma V: Metro-regions versus central/state government? . . .	201
3.3.1. Role of higher level of governments in metropolitan governance	201
3.3.2. New tools for vertical collaboration	205
3.3.3. Summary: dilemma V	211
3.4. Dilemma VI: Participation of private sector actors in public governance?	212
3.4.1. The state of the art	212
3.4.2. Summary: dilemma VI	215
3.5. Dilemma VII: Unequal burdens or distorting subsidies?	215
3.5.1. Functions and responsibilities of cities and metropolitan authorities.	216
3.5.2. Fiscal autonomy.	225
3.5.3. Financing services and infrastructure: public-private partnerships	226
3.5.4. Dealing with intra-metropolitan fiscal inequalities	227
3.5.5. Impact of national equalisation schemes	229
3.5.6. Summary: dilemma VII	233
Notes	234
Bibliography	235
Appendix 1. Definition of Metropolitan Areas in some OECD Countries . . .	245
Appendix 2. OECD Methodology for Identification of Metropolitan Regions. .	250
Appendix 3. Regressions and Correlations in Chapter 1.	272
Appendix 4. Identifying the Determinants of Regional Performances.	279

Part II

Proceedings from Conferences and Workshops on City Competitiveness

Introduction	283
Mainsprings of the Creative City: Lessons for Policy-makers Allen J. Scott. .	289
Globalisation and Urban Competitiveness: Challenges for Different Types of Urban Regions Willem Van Winden	303

Specialisation and Networking in Medium-sized Cities Colin Crouch . . .	317
The Impact of Tertiary Education on Urban Development	
<i>Helen Lawton Smith</i>	329
Policies to Enhance City Attractiveness: Achievements and New Challenges Eiji Torisu	339
The Connections Between Social Cohesion and City Competitiveness Ivan Turok	353
Labour Market Integration Policies to Enhance Social Cohesion Ian Gordon	367
Can Distressed Urban Areas Become Growth Poles? Claude Jacquier	381
Cohesion and Competitiveness: Business Leadership for Regional Growth and Social Equity Manuel Pastor	393
Governance for Metropolitan Sustainability Tony Travers	407
Local Public Finance: Issues for Metropolitan Regions	
<i>Howard Chernick and Andrew Reschovsky</i>	415
Bibliography	433
Boxes	
1.1. The concept of polycentric metropolitan areas	32
1.2. OECD metropolitan regions: data and definition	34
1.3. Main advantages of capital cities	54
1.4. What is city competitiveness?	55
2.1. Growth versus equity in successful metro areas: the examples of Helsinki and Stockholm	95
2.2. Monitoring the growth of capital regions in OECD countries	98
2.3. Examples of different metropolitan cluster approaches	110
2.4. Methodology for identifying clusters in Seoul and Melbourne	113
2.5. Metadistricts to strengthen the SME growth in Milan and the Lombardy region	117
2.6. Examples of industrial liaison programmes in OECD countries	120
2.7. Co-operation among higher education institutions in Öresund and Melbourne	121
2.8. Making higher education institutions more attractive to international students and researchers: the example of Australia and Finland	123
2.9. A well-functioning triple helix model: the example of the Helsinki Culminatum Ltd.	126
2.10. Competitiveness councils	129
2.11. Upgrading clothing and textile industry in Seoul	131
2.12. Environmental concerns in some metropolitan areas	138

2.13. Urban regeneration based on cultural assets: the cases of Athens and Istanbul	142
2.14. Strategies for territorial branding: the example of Busan	143
2.15. Fighting urban poverty and distressed neighbourhoods in Mexico and France	147
2.16. Policies for integrating immigrants into the labour market in Stockholm	150
3.1. Metropolitan governmental authorities: the Stuttgart Regional Association, the Greater London Authority and Metro Portland	167
3.2. Examples of multi-purpose inter-municipal bodies in Canada (Montreal and Vancouver) and in France	171
3.3. Association of the Lyon Urban Region (LUR)	174
3.4. Soft governance in polycentric metro areas: Regio Randstad and Rhine-Ruhr	176
3.5. The Toronto Economic Development Strategy	178
3.6. Cross-border regions: governance by mono-thematic commissions	187
3.7. Cross-border regions: governance by babushka	188
3.8. Cross-border regions: governance by a catch-all institution	189
3.9. Involving civil society in metropolitan governance	198
3.10. City-regions in United Kingdom	204
3.11. Contractual arrangement in urban areas in France, Sweden and Western Canada	207
3.12. Contractual tools used at the metropolitan level in France and Switzerland	209
3.13. Involving small firms in policy making	214
3.14. Pros and cons of local taxes for metropolitan areas	222
3.15. Metropolitan fiscal equalisation in Tokyo, Seoul and Istanbul	228
3.16. Tax base sharing in Pittsburgh and in Minneapolis-Saint-Paul	230

Tables

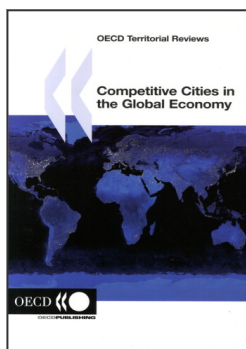
1.1. Metropolitan database	38
2.1. Wage levels of US metropolitan traded clusters (2002)	105
2.2. Examples of industry cluster policies in metropolitan regions	108
3.1. Institutional fragmentation and governance challenges in some OECD metropolitan regions	159
3.2. Case of metropolitan regions represented by a local/regional government	162
3.3. Examples of cross-border regions	184
3.4. Main purposes of a selection of metropolitan co-operative arrangements	194
A.2.1. Definition of metro-regions according to the OECD	255

A.2.2. Sources and years of reference for population	266
A.2.3. Sources and years of reference for GDP	267
A.2.4. Sources and years of reference for labour force	268
A.2.5. Sources and years of reference for employment	269
A.2.6. Sources and years of reference for old-age dependency ratio	270
A.3.1. Correlation between income and population	272
A.3.2. Correlation between income and population in mega cities	272
A.3.3. Correlation of growth rates at the metro and national levels	273
A.3.4. Results for regressions using intercept and control variables	275
B.1. Taxonomy of kinds of relationships between tertiary education and business	330
B.2. Simple model of the determinants of per capita income growth in US metropolitan areas, 1990-2000	399
B.3. Some signals and strategies for competitiveness and cohesion	404
B.4. Summary of elected government arrangements in five major world cities	412
B.5. Differences in tax assignment in OECD countries	417

Figures

1.1. OECD regional typology (Europe)	35
1.2. OECD regional typology (North America)	36
1.3. OECD regional typology (Asia and Oceania)	37
1.4. Worldwide population projections (1950-2030)	41
1.5. Population growth according to the types of regions (1990-2000)	42
1.6. Urbanisation growth in OECD countries	43
1.7. Distribution of the total population among types of regions (1990 and 2000)	44
1.8. Ranking of metro-regions by population size	45
1.9. Ranking of OECD metro-regions by income	47
1.10. Average annual growth rate among OECD metropolitan areas (1995-2002)	48
1.11. Productivity differentials across OECD metro-regions (2002)	49
1.12. Correlation between population size and income in OECD metro-regions	50
1.13. Correlation between population size and income in metro-regions with fewer than 10 million inhabitants	51
1.14. Relations between population and income in metro-regions of over 6 million people	52
1.15. Capital cities and income	52
1.16. Main explanations of GDP differentials between OECD metro-regions (2002)	57
1.17. Cluster composition in the Stockholm Region (NUTS 2)	58

1.18. Share of population of 15 years and more with tertiary education	62
1.19. Differences in per capita GDP of metro-regions and their national level (2002)	64
1.20. Relation between national and metropolitan growth rates	65
1.21. Economic growth at the national and metro-regions levels	66
1.22. Productivity differences between the metro-regions and their national level (2002)	67
1.23. Productivity growth differentials between metro-regions and their national level	68
1.24. Employment differences between the metro-regions and their national level (2002)	70
1.25. Employment growth rates in metro-regions and their countries	71
1.26. Employment growth by type of regions (1996-2001)	72
1.27. Old-age dependency in metro-regions with respect to the national dependency level (2004)	73
1.28. Changes in old-age dependency 1998-2004	74
1.29. Skills in metro-regions and their national average (2001)	75
1.30. Differences in unemployment rates between metro-regions and their countries (2004)	77
1.31. Crime against property by type of region (2001)	78
1.32. Crime against persons by type of region (2001)	79
2.1. Finnish (Helsinki Region) Centre of Expertise Programme	125
3.1. Geographical position of selected cross-border regions	184
3.2. Systems of metropolitan governance across borders	185
3.3. Assignment of responsibilities in cities: the case of Toronto	216
3.4. Assignment of responsibilities in cities: the case of Tokyo	217
3.5. Assignment of responsibilities in cities: the case of Stockholm	217
3.6. Expenditures per capita in selected areas in OECD cities	219
3.7. Revenue sources of various cities in OECD metropolitan areas	220
3.8. Composition of tax revenue sources of various metropolitan areas in OECD countries	221
A.2.1. Methodology for selecting OECD metro-regions	252
A.3.1. Relationship between population size and income	277
B.1. Employment growth 1995-2002	304
B.2. GVA growth 1995-2002	305
B.3. Population growth 1995-2002	305
B.4. GVA growth 1995-2001	306
B.5. Determinants of urban competitiveness	307
B.6. Absolute and relative GDP per capita at PPP, 2000	309
B.7. A hierarchy of social cohesion	357
B.8. Implementing integrated urban renewal programmes and projects	389



From:
Competitive Cities in the Global Economy

Access the complete publication at:
<https://doi.org/10.1787/9789264027091-en>

Please cite this chapter as:

OECD (2007), "Competitiveness, Liveability and Strategic Vision", in *Competitive Cities in the Global Economy*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264027091-4-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.