Investing for Growth:

Building Innovative Regions

Background Report

Meeting of the Territorial Development Policy Committee (TDPC) at Ministerial Level

31 March 2009

This report provides an overview of the key theoretical and policy issues that underlie debate over the future role of regional policies. The report draws on the wide range of policy reviews and studies undertaken by the TDPC since the last high-level meeting, as well as new analytical material. It is intended to complement the Policy Report. A revised version of the report will be produced following the Ministerial meeting.
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INTRODUCTION

The world economic system has never been more interdependent and globalised. Recent events in financial markets worldwide have triggered a deep recession that makes it difficult to foresee how the world economic system might change. Against the backdrop of economic recession, effective policy responses are crucial, and regional policy could play a major role (Box 0.1). Over the past few years, OECD countries have underlined the importance of regions in economic growth and have promoted a new approach to regional policy. This report reviews the main dimensions of this policy shift, drawing on recent work by OECD including analysis of regional data, policy reviews and case studies.

The point of departure for the report is the issue of regional growth. In particular, why some regions grow faster than others, and in ways that do not always conform to economic theory. OECD work suggests that regions grow in very varied ways and that simple concentration of resources in a place is not a sufficient condition for sustained growth. This means that some cities under-perform, while some non-core regions generate growth and jobs with only minimal population densities and crucial masses of public services. The conventional linear relation between concentration and growth, via agglomeration economies clearly needs qualification. The key appears to be how assets are used – how different actors interact and how synergies are exploited. Evidence of this is provided by analysis of the factors that seem to drive growth: for example, infrastructure investment is effective when combined with other forms of investment, notably in education and skills. To encourage innovation, it is not simply the number of researchers or the level of R&D investment that count, but how the innovation system as a whole functions. This leads to very different policy considerations from those that derive from the assumption that simple concentration alone produces economies of agglomeration. It also suggests a role for public policy in ensuring that growth is maximised from the assets present in a region. The market does not achieve this alone.

This new approach to regional policy is undoubtedly more complex and nuanced than earlier versions, and as such it is also potentially more fruitful. Instead of a zero (or even negative) sum game of taxing high-wealth areas to aid low-wealth ones, the accent is rather on the positive sum game of mobilising resources in regions where they are under utilised, removing bottlenecks to further expansion where productivity is already high and, above all, encouraging innovative business (and public sector) practices to stimulate demand and reduce costs. This implies that there is no one-size-fits-all regional policy: similar regions in different countries will often benefit from different policy approaches. It also implies that because different regions have different concentrations of particular economic sectors – manufacturing, agriculture, a variety of services – sectoral policies will have regional implications that need to be taken into account.

Developing strategies that will have an impact on the competitiveness of a given region involves identifying the sources or potential sources of the region's competitive
advantage. An extremely wide range of factors could be targets for policy. Moreover, these advantages are not static but evolve, sometimes rapidly, over time. A region that is at a competitive disadvantage because it is distant from domestic markets can find itself instantly more competitive when trade barriers are reduced with neighbouring countries. In many rural areas, for example, changing lifestyle preferences mean that amenities (natural and cultural public goods such as clean environment, landscape and cultural heritage) represent an increasingly valuable endowment that can contribute to increasing competitiveness. Similarly, potential for economic growth can also be released through administrative reform. Administrative boundaries often inhibit the exploitation of economies of scale, impose additional transaction costs on enterprises and restrict mobility and resource allocation in the labour market.

The capacity of a region to attract and retain mobile resources such as domestic and foreign investment, innovative firms and skilled labour, depends in large part on the quality of services produced or supported by public action (transport and communications infrastructure, research institutions, etc.). In certain cases, subsidies and state aids may effectively compensate for market failures by helping new firms to access research and technological innovations. However, in general, such direct supports tend to distort competition between regions and may contribute to the emergence of a culture of dependency. There are alternatives to a subsidy-based approach around which a proactive regional strategy can be built. These alternatives involve better use of traditional investment instruments such as physical infrastructure development as well as less-tangible or “soft” investments such as human and social capital. In each area, the objective is that governments at different levels provide collective, locally targeted public goods, appropriate to the specific needs of rural and urban areas, to encourage and facilitate private initiative and enterprise.

The report argues that regional policies now go beyond a traditional distinction between top-down and bottom-up approaches. Policies to target public investments, both hard and soft, now depend on clear multi-level governance principles in which each level of government and each actor contributes to the vision, the policy design and equally important, the implementation of those policies. A multi-level governance approach is required in order to address the range of potential areas of public investment: infrastructure and public-goods provision, human capital formation and mobility, as well as business environment and innovation. Without this, public investment could lead to further concentration and greater inequality, with consequences for both regional and national growth.

The report is structured as follows: Chapter 1 reviews the evidence behind some key issues that underlie the discussion of regional policy (such as the role and limits of concentration in generating growth, the role of lagging regions in national economic performance and so on). The report uses a pioneering econometric growth model designed to fit the regional level to explore the sources of economic growth and hence the potential targets for policy intervention. Chapter 2 then looks in turn at recent policy experience in the policy fields that appear to be the most significant for regional development, namely, infrastructure, human capital development and innovation, as well as looking at the evolution of urban and rural policy formulation and implementation. Finally, in Chapter 3 the report turns to the issue of governance and looks at how governance of regional policy helps to determine the effectiveness of policy by overcoming problems of asymmetry of information, helping to better mobilise local knowledge and skills and improve the coherence of policy action across levels of government.
Box 0.1. Strategic response to economic crisis: What contribution can regional policies make?

Public infrastructure investment is a key pillar of policy responses in time of economic recession. One of the key criteria for prioritizing public investment is its longer-term impact on productivity growth. Analysis by the OECD1 shows that infrastructure investment does not have an automatic impact on productivity growth unless it is combined with improvements in human capital and innovation activity in a more integrated approach. This suggests an important role for regional policies in shaping growth and economic recovery policies.

Although responses will vary from country to country, regional policies can play a role in a number of specific ways:

Regional policy frameworks can offer a practical means to accelerate and to maximise the impact of investments. Territorial development policies often have defined and agreed development strategies capable of integrating investment projects into these plans. Even if governments want to stimulate economic activity through infrastructure development; pushing investment projects forward can be difficult without clear roadmaps based on agreed priorities, needs assessment and stakeholder buy-in. Regional development strategies often represent such an agreed and validated road map. Furthermore integrating investment projects into a coherent strategy can augment their multiplicative effects.

Combining different types of investment to ensure that they have an impact on growth. Analytical work in OECD confirms that infrastructure alone does not produce growth. Many countries are now reviewing their approach to regional investment to give a higher priority to “soft” infrastructure – human capital development and innovation support in particular. In a situation of economic crisis, the temptation to invest heavily in hard infrastructure is strong, but evidence from OECD countries suggests that a more integrated approach will have a better impact on growth.

Effectively targeting regions in need. Regional policies are the natural mechanism for focusing investment on specific regions or communities. In the past, regional policies have been used repeatedly to support restructuring of regions in crisis (modernization of industries, promoting entrepreneurship, re-skilling workforces, etc.). As such, there is an accumulated experience with policy instruments and approaches that are relevant for addressing the asymmetric economic and social impacts of the crisis.

Involving existing bodies to ensure co-ordination at the central level. Regional policies involve institutions that coordinate actions among government ministries. In the context of recovery programmes, such co-ordinating bodies could help to ensure that investment strategies are coherent across sectors.

Harnessing the experience of regional development agencies. Regional agencies and similar bodies responsible for implementing regional investment strategies can be a credible conduit for recovery-related investment programmes. In general, these are more private-sector oriented, flexible and respond more rapidly than line ministries can.

Ensuring that local and regional knowledge, funds and capacity are mobilized. Regional policies also often use well-developed mechanisms for co-ordination between the centre and the sub—national level. These mechanisms help to ensure transparency and coherence. In most OECD countries, the sub-national level is responsible for the majority of capital investment. As such, close co-ordination will be required to ensure that local investment and national investment priorities are aligned.
CHAPTER 1

EXPLORING PATTERNS AND SOURCES OF REGIONAL GROWTH

Introduction and main points

As noted in the introduction, an understanding of how regional development policy can best support regional growth stems from an understanding of regional economic performance. OECD regions are very heterogeneous; each possesses very different levels of income, rates of employment, mixes of high and low productivity activities, endogenous and exogenous assets, comparative advantages, stages of development and public policies. This chapter attempts both to quantify disparities in regional economic performance, and to analyse why and how regions grow differently.

KEY POLICY MESSAGES

- Across all OECD countries, regions display very wide variations in both per capita income levels and growth rates, with few signs of sustained convergence.

- Urban areas tend to have higher income levels than rural regions, but not necessarily higher growth rates; there is no consistent relation between continuing concentration and increasing economic performance.

- Faster growth in all types of regions depends on a combination of a more efficient utilisation of factors and increased innovation. Investment in infrastructure and human capital and efforts to boost innovation are essential to boost growth.

- But no single factor explains improved performance. The impact of infrastructure investment depends on investments to improve education and innovation performance. Policy needs to address diverse sectors in a coherent manner.

- Simple concentration of investment and assets is not enough. The key appears to be how assets are used, how different stakeholders interact and how synergies are exploited in different types of regions. The market does not always appear to maximise this potential alone.
Persistent disparities suggest unused potential for growth in OECD regions

Nations have different social, economic and trade policies, different educational and legal systems and institutions, and different economic histories that result in different endowments of physical and human capital. It is therefore unsurprising that they have different average levels of per capita income (whether measured in terms of household income or GDP). Within an individual country, policies, institutions and histories are essentially the same for all agents. Hence per capita incomes should be similar across different regions in the same country. However, this is not the case. Furthermore, disparities typically persist for decades, even generations. It is clear that countries cannot rely on market forces to eliminate income differentials via firms moving to areas where labour is cheaper or more plentiful, or via labour moving to areas where wages are higher. Income convergence is slow or non-existent. New theories of place-based economic growth implied that the growing populations and wealth of major urban areas was an unavoidable result of the economies of scale that they enjoy, and not something that necessarily requires corrective action. Thus, the issue of patterns of growth lies at the heart of the debate over what public policy, and more specifically regional policy, should be aiming to do, how to do it and where.

OECD countries are characterised by substantial regional disparities (measured in terms of per capita regional GDP). Per capita GDP in the top-ranked region of a country is at least double that of the lowest-ranked region, and sometimes far more than that (Table 1.1). In many countries, the region in which the capital city is located has by far the highest GDP per capita. The main exceptions in the EU are Germany, where the Hamburg region has a higher per capita GDP than the Berlin region, and Italy, where the Milan region has a higher GDP per capita than Rome. Table 1.1 also shows that when the highest per capita GDP region is excluded, differentials are narrower, although they still remain large. In general, the lowest GDP regions in European countries lag the region with the second highest GDP by 20-60%, leaving considerable scope for catching up. Income differentials within most non-European countries (where regions generally cover larger geographical areas than the TL2 region considered here) tend to be wider. Other measures, namely the Gini coefficient (see Figure 1.1.), the Atkinson measure, and a General Entropy measure, give similar results (Appendix 1 and 2 gives details of the construction of the three measures and the results for the other two).
Table 1.1. Ratios of per capita GDP by region, 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio of highest to lowest</th>
<th>Ratio of second highest to lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1.57</td>
<td>1.52</td>
</tr>
<tr>
<td>Austria</td>
<td>2</td>
<td>1.52</td>
</tr>
<tr>
<td>Belgium</td>
<td>2.75</td>
<td>1.37</td>
</tr>
<tr>
<td>Canada</td>
<td>2.39</td>
<td>2.21</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>2.69</td>
<td>1.18</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.63</td>
<td>1.23</td>
</tr>
<tr>
<td>Finland</td>
<td>1.56</td>
<td>1.19</td>
</tr>
<tr>
<td>France</td>
<td>1.95</td>
<td>1.2</td>
</tr>
<tr>
<td>Germany</td>
<td>2.58</td>
<td>2.01</td>
</tr>
<tr>
<td>Greece</td>
<td>1.76</td>
<td>1.11</td>
</tr>
<tr>
<td>Hungary</td>
<td>2.57</td>
<td>1.56</td>
</tr>
<tr>
<td>Italy</td>
<td>2.04</td>
<td>2.04</td>
</tr>
<tr>
<td>Japan</td>
<td>1.71</td>
<td>1.71</td>
</tr>
<tr>
<td>Korea</td>
<td>1.28</td>
<td>1.24</td>
</tr>
<tr>
<td>Mexico*</td>
<td>6.24</td>
<td>4.49</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.31</td>
<td>1.15</td>
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<tr>
<td>Norway</td>
<td>1.87</td>
<td>1.26</td>
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<tr>
<td>Poland</td>
<td>2.32</td>
<td>1.57</td>
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<tr>
<td>Portugal</td>
<td>1.7</td>
<td>1.33</td>
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<tr>
<td>Slovak Republic</td>
<td>3.43</td>
<td>1.32</td>
</tr>
<tr>
<td>Spain</td>
<td>1.91</td>
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<tr>
<td>Sweden</td>
<td>1.66</td>
<td>1.13</td>
</tr>
<tr>
<td>UK</td>
<td>2.01</td>
<td>1.41</td>
</tr>
<tr>
<td>USA</td>
<td>5.17</td>
<td>2.46</td>
</tr>
<tr>
<td>National GDP, EU15</td>
<td>2.92</td>
<td>1.8</td>
</tr>
<tr>
<td>National GDP, EU27</td>
<td>4.27</td>
<td>2.63</td>
</tr>
<tr>
<td>National GDP, OECD</td>
<td>7.46</td>
<td>4.6</td>
</tr>
</tbody>
</table>

*2004 for Mexico

Source: OECD (2008) Regional Database
Regions with higher employment rates tend to enjoy higher per capita GDP, while those with low employment rates lag in terms of per capita GDP. (Figure A.3.1 in Appendix 3). The relationships between GDP per capita and employment rates by region, when the capital region is excluded, are not always statistically significant, and even when this is the case, (Australia, Canada, Czech Republic, France, Germany, Mexico, Portugal, Sweden, Switzerland and the United States USA), the sign is “as-expected”. Korea and Poland seem to be the only countries where the relationship is the opposite to what would normally be expected. An estimated coefficient suggests that regions with an employment rate one percentage point higher than the national average enjoy approximately one-third of a percentage point higher per capita incomes than the national level. This implies that per capita regional GDP in most countries is in direct proportion to the numbers of those in employment in those regions. Analysis of participation rates also indicates a general positive relationship between income measured in terms of GDP and participation rates. (Figure A.3.2 in Appendix 3).

Similarly, higher unemployment rates are associated with lower per capita regional GDP. OECD data shows that there is usually a negative relationship between regional GDP per capita and unemployment rates (Figure A.3.3 in Appendix 3). Korea, Poland and Mexico are the only countries for which the relationship is the opposite to what would normally be expected, and it is insignificant for Australia, Austria, the Czech
Republic, France, Sweden, Switzerland, Turkey and the United States. In general, however, the higher the unemployment rate, the lower the GDP per capita. The policy implication of the analysis is that, outside the capital city regions, and in the majority of countries, labour is underutilised to a greater or lesser extent; those regions are therefore operating at below their potential, and underutilisation has a direct impact on productivity and income.

If participation rates in low GDP per capita regions could be brought up to levels similar to those found in the best-placed region, and if unemployment rates could be reduced down towards national averages, per capita GDP in lagging regions would potentially rise, thereby reducing regional imbalances in GDP per capita (though rural-urban differentials might persist where those stem from factors other than labour market conditions, such as geographical remoteness). In most places, lagging regions lag mainly because they have relatively fewer people in the active age group in their labour forces, and because more of them are unemployed. Furthermore, spatial patterns of unemployment tend to persist over prolonged periods of time, especially in Europe, suggesting that employment problems in particular regions are not reflections of temporary or cyclical factors, but rather, are structural in nature. During the period 1993-2003, the relative position of 80% of European regions facing very high unemployment in 1993, remained, on average, in the same position in 2003. The equivalent figure is about 65% in North America and less than 50% in the Asia/Pacific region (OECD 2005 Employment Outlook). In that respect, and excluding most of the highest income regions, it seems that at first sight, regional disparities are reflections of different labour market outcomes.

Two important supply factors influencing regional labour market outcomes are education attainments and production specialisation patterns (OECD 2005 Employment Outlook, Chapter 2). For example regional production specialisation patterns are estimated to account for 30% of the average employment differentials between regions in Italy, almost 50% in Germany and 40% in Spain. Regarding human capital, there are a number of empirical studies (Overman and Puga, 2002; Newell, 2003 and Elhorst, 2003 for a survey) which find links between educational attainment and regional unemployment rates. Regions where unskilled labour is relatively abundant are likely to be disproportionately negatively impacted by skill-biased technological change and competition from newly emerging countries.

Educational attainment levels and the capacity of regions to innovate are also associated with GDP per capita levels. Regions with higher GDP per capita enjoy higher levels of tertiary education (Figure A.3.4 in Appendix 3). Except in Canada, Germany and Korea, the relationship between GDP per capita and tertiary education is positive in 15 OECD countries, and in six of them (i.e. France, Italy, Norway, Spain and the United States), it is statistically significant. The capacity of regions to create innovation, insofar it is measured through patent application, is also positively associated with GDP per capita (Figure A.3.5 in Appendix 3). Nevertheless this positive relationship is not present in Australia, Austria, Canada, Hungary, Portugal and Sweden, when excluding the capital city. The direction of causality in this analysis is not clear. Additional analysis in this chapter estimates the impact of human capital and patent application on GDP per capita growth.

In principle labour mobility could act as a buffer to reduce regional employment and unemployment imbalances, but in practice there are transaction costs to labour mobility
(as discussed in Chapter 2). This is confirmed by the fact that regional unemployment and employment rates differentials persist over prolonged periods of time (GOV/TDPC/TI(2006)3). Although consideration should be given to obstacles hindering geographic labour mobility arising from such issues as housing policies, amongst others, migration will not be the ultimate cure for regional imbalances. Even where there are no legal barriers to internal migration, income differentials have persisted for many generations in some countries, suggesting that response to wage differentials and job opportunities can be very sluggish. For lagging regions, migration comes at a cost, as the propensity to migrate is much higher among the highly skilled, brain-draining the region and leaving the low-skilled more dependent on local employment opportunities. Alternative strategies to become more competitive can lie in the ability of lagging regions to attract private capital, improve their accessibility and connectivity to other regions, and promote endogenous growth by identifying untapped resources with potential sources of growth.

Concentration drives growth, but private benefits can bring societal costs

The inequalities described above are an outcome of several processes, of which the most significant is concentration. In approximately half of OECD countries more than 40% of the national GDP is produced in less than 10% of all regions that account for a small share of the country’s total surface and a high share of the country’s population (Figure 1.2). The concentration of economic activity in specific geographic locations occurs mainly because of benefits associated with economies of agglomeration. People want to live where firms, and therefore job opportunities, are concentrated. For their part, firms want to locate where demand, and therefore population, is large, and where they know will have a deep labour market pool to draw from, and where they know suppliers and buyers in their industry are located. New economic geography theories explain why and how agglomerations become increasingly attractive. This has resulted in strong concentrations of particular kinds of activity in specific locations – sectoral specialisations and clustering, for example. It has also led to concentration of innovation, with patenting activity being, in general, even more strongly concentrated than output. (Regions at a Glance 2009).
Figure 1.2. Percent of national GDP in the top 10% of TL3 regions when ranked by GDP, 2005

Source: OECD (2009) Regions at a Glance
Box 1.1. New economic geography theories

The New Economic Geography (NEG) theories analyse mechanisms of circular or cumulative causation that drive increasing concentration. The NEG explains why consumers and firms tend to agglomerate together in specific geographic areas, a phenomenon already noted and analysed by Alfred Marshall in 1890 (“Principles of Economics”, Book IV, Chapters IX-XIII). Studies of this kind include Perroux’s notion of “growth poles” (1955), Myrdal’s analysis of “circular and cumulative causation” (1957), and Hirshman’s concept of “forward and backward linkage” (1958). The NEG formalises these kinds of cumulative causation mechanisms into a mathematical analytical framework in Krugman’s (1991) seminal paper. Agglomeration economies occur when a firm enjoys increasing returns to scale in a particular place, either because of the presence of natural advantages (i.e. natural resources, location etc), monopolistic protection, political reasons (e.g. the decision to create a capital city) or any other reason. The presence of increasing returns to scale induces other firms to locate there, as well as people in search of higher wages, job opportunities and cultural values.

There are a number of inter-connected mechanisms that work to produce agglomeration economies:

- Sharing of indivisible facilities such as local public goods or facilities, particular to a place, that serve several individuals or firms. Some examples are facilities such as laboratories, universities and other large goods that cannot belong to one particular agent but where some exclusion is implicit in the provision of it.

- Gains from the wider variety of input suppliers that can be sustained by a larger final-goods industry, that is, the presence of IRS along with forward and backward linkages allows firms to purchase intermediate inputs at lower costs.

- Gains from the narrower specialisation that can be sustained with higher production levels. Several firms specialise in producing complementary products, reducing overall production costs.

- Risk reduction: if there are market shocks, firms can adjust to changes in demand accordingly as they have access to a deep and broad labour market that allows them to expand or contract their demand for labour.

- Matching mechanisms by which agglomeration improves the expected quality of matches between firms and workers, so both are better able to find a better match for their needs. Similarly, an increase in the number of agents trying to match in the labour market also improves the probability of matching.

- Learning mechanisms based on the generation, the diffusion, and the accumulation of knowledge refers not only to the learning of technologies, but also the acquisition of skills (knowing not only how, but also who).

Concentration in output is closely related to processes of urbanisation. For the first time in history, the population of cities exceeds that of the countryside, and the largest cities in the world are no longer located in the richest countries. Even in developing countries, where agriculture remains the dominant economic activity, people flock to the biggest cities despite their low standards of housing and sanitation, and often high levels of poverty and crime. Since they do this of their own free will, it must be assumed that they believe that they are, or will be, better off in the city than in the rural areas from which they came. In rich countries, moving to the largest cities involves facing higher
prices for accommodation, possibly longer and more tedious commutes, and possible difficulties in finding and keeping the high-paid jobs that attract migrants in the first place. Nevertheless, these are costs that are willingly paid by the increasing numbers of people who can afford to do so. In 2005, one third of the OECD population lived in large urban regions, i.e. TL3 regions with populations exceeding 1.5 million inhabitants. (Figure 1.3).

Figure 1.3. Percentage yearly change in total population living in large urban TL3 regions and in the whole country; 1995 to 2005

Source: OECD (2009) Regions at a Glance

Yet the benefits associated with economies of agglomeration are not unlimited; cities can reach a point where they no longer provide increasing returns and become less competitive. New economic geography theory predicts that further concentration is not always the most desirable outcome; the external economies of scale are overtaken by the external diseconomies of congestion. Encouraging even more concentration under these conditions will not yield higher growth rates of per capita GDP. Comparing levels of GDP and growth rates of metro-regions with respect to national and OECD averages over
five year and ten year periods reveals that although metro regions usually have higher-than-average per capita GDP, in most cases they have not experienced higher-than-average national growth rates. Figure 1.4 displays the growth rates and initial levels of GDP per capita in 78 metro regions, benchmarked to the OECD’s average annual growth rate over the last decade and its initial level of GDP per capita. Out of the sample of 78 metro-regions only 49% grew annually on average faster than the average national growth rate in the OECD, and only 45% grew faster than their respective national averages.

Figure 1.4. Initial GDP per capita and annual average growth rates in GDP per capita among 78 metro-regions, 1995 and 2005

Coverage: due to data limitations, the time period is shorter in several metro-regions: Canada (one year of data: 2003-2004), New Zealand (three years: 2000-2003), the United States (three years: 2001-2004), Turkey (six years 1995-2001), Mexico (nine years: 1995-2004) and in the rest it is 1995-2005.

Source: Own calculations based on a sample of urban areas where labour markets are self-contained and population was above 1.5 million people.

Negative externalities associated with large concentrations in urban areas raise the question of whether the costs borne by society as a whole are becoming unsustainable. As externalities, they are not internalised by firms and households, and may only show up as a direct cost in the long term. They include for instance high transportation costs (i.e. congested streets) and loss of productivity because of long commuting times, higher health costs and an impact on global warming resulting from a poor environment. The manifestation of these different types of costs is diverse among cities but “OECD Competitive Cities in the Global Economy” highlighted a negative correlation between city size and GDP per capita above a threshold of 6-7 million inhabitants. A hypothesis behind this finding is that the relationships between dynamism and city size is probably following an inverted U-curve, due to increasing negative externalities (OECD 2006, OECD Competitive Cities in the Global Economy). This has led to debate as to whether increasing concentration leads to what has been termed the “privatisation of benefits and socialisation of costs” (see Annex 1 for a discussion of the costs of congestion).

Public intervention could assist to augment economies of agglomeration and prevent or delay their decline. As labour markets display asymmetry of information between those searching for a job and those hiring, public employment offices and other types of institutional support may help improve the functioning of local labour markets. Linkages
among firms require, as well as a freer flow of information, good transportation systems that allow for the exchange of products at a low cost. Knowledge will only “spill over” across a region if appropriate urban spaces exist for people to exchange ideas on a daily basis - spaces that are unlikely to be provided solely by the private sector. As concentration is only a necessary, but not in itself sufficient, condition for agglomeration economies, it is not surprising that very large urban areas such as Mexico City, Istanbul or Seoul, but also more advanced cities like Milan face problems to fully exploit the benefits of concentration.

Patterns of growth are unpredictable (and growth in unexpected places makes a big contribution to national prosperity)

There is a tendency to assume that growth is led by the core, high GDP regions and that these regions generate the lion’s share of new wealth. Yet, in more than half of OECD countries, the region with the highest GDP per capita contributed less than 25% to national growth during 1995-2005 (Table A.4.1 in Appendix 4). The contribution of lagging regions (defined by those regions with a GDP per capita below the national average) was significantly higher than the contribution of the regions with the highest GDP in 85% of OECD countries, and it was higher than the contribution of regions above the national average in almost half the countries (Table A.4.1 in Appendix 4). In the Slovak Republic, the Czech Republic and Australia lagging regions contributed more than 60% of the overall national growth during the past decade (Figure 1.5).

Figure 1.5. Contribution of national growth by TL2 regions with a GDP per capita below the national average, 1995-2005
The contribution to national growth of each region depends on the growth rate of each region and their overall size (i.e. share of GDP).

Source: own calculations using data from OECD (2008) Regional Database.

If it is accepted that the objective of regional development policy is to help each region maximise its specific comparative advantage then it is possible to have growth in diverse regions that need not lead to convergence. The specific mix of industries and labour skills differs between rural and urban regions, so the returns to labour and the level of GDP per capita can vary considerably across regions. Analysis shows that within OECD countries there are rural regions that have higher rates of growth than urban regions. These regions have found ways to exploit their resource endowment and economic opportunities in an efficient manner. High rates of growth may be associated with specific fixed resources such as a scenic environment or highly productive arable land that cannot be replicated in other regions. Rural regions adjacent to urban regions are also often able to take advantage of proximity effects. A number of industries, such as warehousing and large scale manufacturing, often favour centrally located rural regions since they offer low cost land, proximity to a large pool of labour and relatively high accessibility. The foreign-owned automobile manufacturers in the United States generally choose locations outside medium-sized urban centres for assembly plant locations since they offer the best combination of access to transport infrastructure, large parcels of land and an adequate size pool of labour.

The implication of this is that convergence is less important than being able to improve the performance of all regions. Indeed, looking at patterns of growth, it is sometimes difficult to find evidence that convergence is uniformly associated with improved national economic performance. Although convergence and divergence are rarely smooth processes, it is possible to class countries (Appendix 2) into those where, on average, regional disparities have narrowed over time: Austria, Belgium, France, Germany, Italy, Korea, Netherlands, Norway, Portugal, Spain, Turkey; those where differentials have widened: Australia, Czech Republic, Finland, Greece, Hungary, Ireland, Poland, Slovak Republic, the United Kingdom, the United States; and those where little overall change is evident: Canada, Denmark, Japan, Mexico and Sweden. It is interesting, too, that with some exceptions, countries which experienced diverging regional income disparities tended to have faster real GDP growth rates at the national level (Table 1.2). This finding is taken up below in the discussion of regional GDP growth differentials and policy responses.
Table 1.2. National growth rates in converging and diverging countries

<table>
<thead>
<tr>
<th>Converging</th>
<th>time period</th>
<th>av yr growth</th>
<th>Diverging</th>
<th>time period</th>
<th>av yr growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>1980-2007</td>
<td>5.1</td>
<td>Slovak Republic</td>
<td>1990-2007</td>
<td>8.6</td>
</tr>
<tr>
<td>Norway</td>
<td>1980-2005</td>
<td>3.9</td>
<td>Czech Republic</td>
<td>1990-2007</td>
<td>4.4</td>
</tr>
<tr>
<td>Austria</td>
<td>1980-2007</td>
<td>4.4</td>
<td>Finland</td>
<td>1980-2007</td>
<td>5.8</td>
</tr>
<tr>
<td>Germany</td>
<td>1991-2007</td>
<td>1.9</td>
<td>UK</td>
<td>1980-2007</td>
<td>4.8</td>
</tr>
<tr>
<td>Belgium</td>
<td>1980-2007</td>
<td>3.5</td>
<td>Australia</td>
<td>1981-2007</td>
<td>4.2</td>
</tr>
<tr>
<td>Turkey</td>
<td>1990-2001</td>
<td>2.5</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>min</th>
<th>max</th>
<th>median</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converging</td>
<td>1.9</td>
<td>9.6</td>
<td>3.9</td>
<td>4.27</td>
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<tr>
<td>Diverging</td>
<td>4.2</td>
<td>11.3</td>
<td>5.45</td>
<td>6.31</td>
</tr>
</tbody>
</table>

Source: OECD.Stat and own calculations using data from Cambridge Econometrics (see Appendix 2)

Even though economic activity tends to concentrate in specific areas, especially in large urban cities, labour productivity and GDP per capita growth rates are not necessarily higher in areas of concentration. In fact they tend to be more evenly spread-out across the territory, especially growth rates. For instance in Spain, although the regions with the highest density of output - Madrid, Barcelona and Vizcaya - are also, generally speaking, the most productive regions, they are not amongst the most dynamic Spanish regions in terms of GDP per capita growth with the exception of Vizcaya. Higher pockets of growth are present in the Southern regions of Badajoz, Almeria, Cadiz, Huelva and Malaga (Figure 1.6).
Figure 1.6. GDP per square kilometre, GDP per worker and the GDP per capita growth in TL3 Spanish regions

GDP per square kilometre  
GDP per worker  
GDP per capita annual growth

GDP and GDP per worker data are expressed for year 2005, and the growth of GDP per capita is the annual average over 1995-2005

Source: Own calculations using data from OECD (2008) Regional Database.

Similarly, in Poland the territories with the highest density of output – Warszawa, Poznan, Krakow, Lodz and Wroclaw – also display the highest levels of productivity in the country, but not necessary the highest growth rates (Figure 1.7).

Figure 1.7. GDP per square kilometre, GDP per worker and the GDP per capita growth in TL3 Polish regions

GDP per square kilometre  
GDP per worker  
GDP per capita annual growth

GDP and GDP per worker data are expressed for year 2005, and the growth of GDP per capita is the annual average over 1995-2005

Source: Own calculations using data from OECD (2008) Regional Database.

In Germany, Mexico and Korea, the territories with highest economic density do not necessarily display the highest level of productivity. For example, in Germany output is mostly concentrated in the city-regions of Hamburg, Berlin, Bremen Dusseldorf, Dortmund, Cologne and Stuttgart but while Hamburg, Bremen and Stuttgart still remain amongst the highest productivity regions in Germany, Cologne, Dortmund and Berlin are not in this group. Furthermore, in terms of GDP per capita growth none of the city-regions are amongst the top 20 German performing regions (Figure 1.8).
In Mexico, Distrito Federal and its outskirts concentrate the highest density of output, while the most productive regions are also present in the northern regions of Nuevo Leon, Campeche, and Chihuahua and the southern regions of Quintana Roo and Coahuila. Furthermore, in terms of GDP per capita growth, Distrito Federal and its outskirts are amongst the lowest performing Mexican regions, while pockets of growth seem to occur across the entire Mexican territory, and especially in regions of the South and North of Mexico (Figure 1.9).

In Korea, the economy concentrates mostly in Seoul and its surrounding region Ichonon, while the region with the highest productivity is the southern region Ulsan, along with the predominantly rural regions Chungcheongnam-do, Jeollanam-do and Gyeongsangbuk-do. These latter three regions are amongst the highest performing Korean regions in terms of GDP per capita growth (Figure 1.10).
Figure 1.10. GDP per square kilometre, GDP per worker and the GDP per capita growth in TL3 Korean regions

GDP and GDP per worker data are expressed for year 2005, and the growth of GDP per capita is the annual average over 1995-2005.

Source: Own calculations using data from OECD (2008) Regional Database.

In sum, there is no unique pattern of sustainable growth. Concentration of economic activity does not necessarily yield higher levels of productivity or higher growth rates. Opportunities and possibilities for growth exist in all types of regions across the entire territory and will depend on how well the region is capable of mobilising its assets to make full use of its growth potential.

Why do some regions grow faster than others? Evidence from a regional growth model

Econometric analysis can shed some light on the factors that influence regional economic growth. The model used here explores the sources of regional growth using a variety of techniques (Box 1.2 and Appendix 5). The analytic approach used to investigate the factors determining regional economic growth borrows from similar analyses used in recent years to research economic growth across countries. As many of the variables of interest – institutions and systems – change very slowly over time, and often do not have easily quantifiable values, the particular analytic technique usually employed is a panel data approach. This approach requires a large number of observations for the econometric model to produce useful results, but has the advantage that the results can throw light on whether different growth factors are significant only in combination, or whether they are independently significant.
Box 1.2. Explanation of the regional growth model using a cross-section approach

The model that is tested is:

\[
\frac{1}{T} \ln \left( \frac{GDP_{t+T}}{GDP_t} \right) = \alpha + \beta_1 \ln(InitialY_t) + \beta_2 \ln(Infrast_t) + \beta_3 \ln(PrimEdu_t) + \beta_4 \ln(Te\n + \beta_5 \ln(Empl\ Rate_t) + \beta_6 \ln(Patents_t) + \beta_7 \ln(R & D Total_t) + \beta_8 \ln(R & D BUS_t) + \beta_9 \\
+ \beta_{10} \ln(R & D HE_t) + \beta_{11} \ln(Agg\ Ag_t) + \beta_{12} \ln(Agg\ Man_t) + \beta_{13} \ln(Agg\ Fin_t) + \beta_{14} \\
+ \beta_{15} \ln(Dist\ Mkts_t) + u_t
\]

where \( t = 1995 \) and \( T=9 \), and annual average per capita GDP growth rates are regressed on:

- \( InitialY_t \) = initial GDP per capita
- \( Infrast_t \) = motorway density defined by kilometres of motorway to population
- \( PrimEdu_t \) = primary educational attainments
- \( Tert\ Edu_t \) = tertiary educational attainments
- \( Empl\ Rate_t \) = initial year employment rates
- \( Patents_t \) = patent applications
- \( R & D Total_t \) = total research and development expenditures
- \( R & D BUS_t \) = research and development expenditures carried out by firms
- \( R & D GOV_t \) = research and development expenditures carried out by the government
- \( R & D HE_t \) = research and development expenditures carried out by higher education institutions
- \( Agg\ Ag_t \) = agglomeration economies in agriculture defined by the size of the sector (i.e. employment in agriculture) times the index of specialisation (see endnote 3) in agriculture
- \( Agg\ Man_t \) = agglomeration economies in agriculture defined by the size of the sector (i.e. employment in manufacturing) times the index of specialisation (see endnote 3) in manufacturing


The first explanatory variable is included to test for convergence or divergence of regional income. A negative sign in this variable signals that relatively poorer regions are growing faster and therefore a process of convergence is under way. Conversely, a
positive sign indicates that richer regions are growing faster and thus that regional GDP is diverging. This convergence or divergence trend is conditional on a series of variables that determine growth. A number of variables have been introduced to model physical capital, human capital and innovation. Firstly, as capital stock data at the regional level are not available, a measure of infrastructure (motorways) was included. Secondly, human capital is included in the form of educational attainment for primary schooling and for tertiary education. Thirdly, innovation enters into the model using patents and research and development (R&D) expenditures. Several variables that reflect expenditure in R&D were included, such as those carried out by the government, the private sector, higher education institutions, and non-profit organisations. In addition to economic growth theory variables, a proxy for the proper functioning of labour markets was included in the form of employment rates. Since data on all variables of interest are not available for all regions, several versions were estimated. The values and significance of the estimated coefficients are reported below, in Table 1.3.

Table 1.3. OLS cross section results for regional economic growth in OECD TL2 regions, 1995-2005

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
<th>Model 10</th>
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<td>Constant</td>
<td>0.0268</td>
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<td>0.1695</td>
<td>0.1953</td>
<td>0.1982</td>
<td>0.1934</td>
<td>0.193</td>
<td>0.3014</td>
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<td>Initial Y</td>
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<td>0.0012</td>
<td>-0.0122</td>
<td>-0.0097</td>
<td>-0.0094</td>
<td>-0.015</td>
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<td>Infrast</td>
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<td>Prim Edu</td>
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<td>---</td>
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<td>-0.0129</td>
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<td>-0.004</td>
<td>-0.0075</td>
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<td>Tert Edu</td>
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<td>Patents</td>
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<td>0.0002</td>
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<td>Dist Mks</td>
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<td>0.0033</td>
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<td>0.4841</td>
<td>0.3717</td>
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</table>

*/ Significant at the 95% confidence level; /** Significant at the 99% confidence level

Countries missing as the model grows in variables due to lack of complete data mainly in R&D expenditure data: model 1- Iceland; model 2- Australia, New Zealand and Norway; model 3- Denmark, Iceland, Japan and Turkey;
models 4 & 5 - Australia, Denmark, Iceland, Japan, New Zealand, Norway, and Turkey; model 6 - Australia, Denmark, Iceland, Japan, New Zealand, Norway, Switzerland and Turkey; model 7 - Australia, Belgium, Denmark, Iceland, Ireland, Japan, Mexico, New Zealand, Norway, Sweden, Switzerland and Turkey; model 8, 9 & 10 - Australia, Belgium, Denmark, Germany, Iceland, Ireland, Japan, New Zealand, Mexico, Norway, Sweden, Switzerland and Turkey.


Convergence is visible across OECD regions, but only when key assets and investments are in place. Using the full sample for the period 1995-2005, the model results imply that convergence took place across OECD regions, but that this was conditional on a series of factors. Infrastructure does not affect regional growth by itself, except when education and innovation are considered (Models 6-7). One possible explanation for this is that investment in public infrastructure does not stimulate growth in the absence of workers with higher levels of education and innovation activity, which suggests policy co-ordination opportunities between human capital formation enhancing innovation and infrastructure provision. The insignificant coefficients in Models 8 and 9 may result from the high correlation that exists between tertiary education and the innovation indicators.

Infrastructure is the foundation of regional development and has been the target of significant investment through regional policies over the past decades. However, at least in OECD economies, improvements in infrastructure endowments do not lead automatically to higher growth. Yet when combined with improvements in education and better performance on innovation indicators, the influence of infrastructure investment on growth becomes significant (Models 6-7). One possible explanation is that investment in public infrastructure does not stimulate growth in the absence of workers with higher levels of education and firms that can exploit new infrastructure with innovative products and processes. This implies the need for policy co-ordination between human capital formation enhancing innovation and infrastructure provision.

Human capital investment supports growth in all types of region, with particularly high returns for some levels of education and in some types of region. In terms of human capital, while primary schooling is negatively associated with growth, tertiary education positively impacts regional performance. Once again, it is not only infrastructure provision or education in general, but more precisely tertiary education that promotes growth. One possible explanation for the estimated negative relationship between growth and employment rates is that which is also evoked by the convergence hypothesis. Regions with lower employment rates are not fully exploiting their labour resources and therefore are located far away from their production possibilities frontier. With appropriate policies, regional economies could tap on those dormant resources and achieve higher growth rates. In the longer term, the spur to growth brought about by more intensive use of potential labour resources will eventually come to a halt, once such resources are fully utilised. Thereafter, growth would have to come from other sources.
Box 1.3. Summarising the results from the growth model and related analysis

Additional econometric models using the OECD Regional Database (see Appendix 5) have looked at the evolution of regional economies from different angles and using different breakdowns of the available data. The results of this research can be summarised as follows:

1. Human capital and innovation positively influence regional growth as endogenous growth theories suggest.

2. Elements from new economic geography theories, such as agglomeration economies, are also relevant and reveal that there is a strong spatial content to growth.

3. Infrastructure becomes a necessary but not sufficient condition for growth and only relevant if human capital and innovation are present.

   These results suggest that in order to promote regional growth, policy makers should have a comprehensive regional policy in mind which not only links regions through infrastructure investments, but also fosters human capital formation, thereby facilitating the process of innovation. The risk, which results from a partial vision of regional policy, lies, as our models seem to suggest, in a leaking, instead of linking, process because it provides only infrastructure or causes a brain-drain, if only human capital is promoted.

The second type of analysis is based on dynamic econometric modelling through panel data analysis which allows for our spatial analysis to interact with time. The results of all these sets of models confirm the vast majority of results obtained in our cross-section models (Appendix 5).

However, a deeper analysis reveals that:

4. Infrastructure and human capital require 3 years to positively influence growth.

5. Innovation is a longer-term process which has a positive effect on regional growth only after a five year period.

   A third type of analysis is based on a knowledge production function that relates innovation input variables such as human capital and research and development (R&D) to innovation outcomes such as patenting activity (Appendix 5). The results show that:

6. Human capital has a strong impact on regional growth both directly (from previous analysis) and indirectly through patenting.

7. R&D is an indirect determinant of growth through its impact on patenting activity.

8. Geographic space plays a role in determining innovation in these models as agglomeration economies emerge as a determinant.

   The final analysis is dedicated to spatial econometrics through which we find that the performance of neighbouring regions strongly determines the performance of any given region in the OECD (Appendix 4). This spatial correlation on growth also confirms that infrastructure and human capital are drivers of economic expansion, but it does not confirm previous results for innovation. These results suggest that as capital and talent agglomerate they tend to positively influence growth in neighbouring regions - and vice versa - but innovation remains a highly local element that does not necessarily influence growth in neighbouring regions. It is also possible that our models should attempt to incorporate lagged values, as in our panel data analysis, at the time that spatial econometrics is carried out.


Innovation is clearly important and its influence would increase if more sensitive indicators (e.g., on non R&D driven innovation) were available. Innovation activity insofar as measured by patents has a positive impact on regional growth over a five and a
ten year period (Model 6 in Table 1.3 and Table A.5.2 in Appendix 5). Some factors are clearly more important than others in determining the innovation performance of a region. The policy issue is to know which “input” factors have the clearest impact on innovation outputs and, in turn, where public investment will have the greatest impact. The most common analytical approach is to construct a knowledge production function that combines some of the key indicators assumed to contribute to the generation of patentable knowledge. The pattern that emerges from estimation of the knowledge production function for OECD regions (Table A.5.3 in Appendix 5) suggests very large disparities in innovation outcomes and a spatially concentrated innovation map. In general the results confirm that:

- Human capital is the strongest determinant of innovation output. The relation between educational attainments at tertiary level, measured in terms of patenting activity is strongly positive.

- Investments in R&D have a positive effect on patent activity in all categories considered; these are R&D expenditures by businesses, the public sector, higher education institutions and by the private non-profit sector.

- The number of R&D personnel has a smaller impact than expenditures on patenting.

- The presence of knowledge intensive services and high technological manufacturing enhances regional innovation activity in terms of patent applications.

- The presence of economies of agglomeration only has a positive influence on innovation in the case of financial intermediation, while a lack of agglomeration economies reduces patenting activity.

In general, the results highlight the influence of the main theoretical factors that promote innovation – the usual list of “hard” inputs such as education, research investment, and so on. The relationship is sufficiently strong as to confirm the utility of investment in these policy areas if the desired objective is innovative, commercialisable products and processes. Although there are clear limitations to an approach that focuses on patents as a proxy for innovation output, the concentration of patenting and its links with other variables do suggest some spatial “logic” that governs the distribution of innovation outcomes. Technology and innovation are fostered in favourable environments. These favourable environments certainly offer material advantages for innovators, whether they are on the scientific research or enterprise side. For example, as the research confirms, there is a close link between R&D expenditure and patenting activity. There is also a close link between R&D personnel per thousand workers and patenting. These correlations are robust even after controlling for such things as industry sector. There is also a link between patenting and educational attainment, which suggests that levels of public investment in education and, more specifically, in science and engineering disciplines give some return in terms of innovation activity. The principal weakness of the approach, however, is that a sizeable minority of OECD regions have very low or approaching zero values for key indicators and as such the analysis does not provide clear orientations for them. More work is needed to improve the sensitivity of sub-national indicators in order to capture the breadth of innovation activities in firms that public policy seeks to target.
Conclusion

Regional development depends on the interplay between physical capital, human capital and the business environment. The results of the analysis show the benefits strong interaction between different types of regional assets. Discerning which factors will result in regions becoming more productive and competitive is crucial for ensuring their future prosperity, attracting investment and retaining their best workers. Educational attainment is an important enabling factor. Indeed, public investment in infrastructure seems to have a positive effect on regional growth, but the effect is much stronger when educational attainment is high. The determining factors in regional performance appear to be mutually reinforcing, which underlines the importance of a cross-sectoral approach to policy formulation and delivery. The analytic results also suggest that the effects of investment in human capital and on infrastructure typically take about three years to emerge.

A key rationale for a renewed regional policy is that simple concentration of resources in a place does not necessarily translate into economies of agglomeration. These are conditioned on the existence of a pooled labour market, backward and forward linkages among firms, and knowledge spillovers. The key appears to be how assets are used, how different stakeholders interact and how synergies are exploited in different types of regions. This underlines the importance of integrated regional development policy strategies that cut across sectors and that are based on inclusive governance arrangements.
Notes


2. This figure is obtained by regressing the log of GDP per capita relative to its national value to the log of employment rates relative to the national value for 92 TL2 regions for the year 2005. The estimated coefficient value is 0.283 with a t-value of 2.30 (i.e. statistically significant at a 90% confidence interval).
CHAPTER 2
A NEW POLICY APPROACH TO BUILD INNOVATIVE REGIONS

Introduction and main points

This chapter explores the current state of regional policies and highlights the key policy issues with the aid of illustrative examples and evidence of good practices from across the OECD. The chapter discusses the evolution of regional policy in OECD countries and the “new paradigm”. It then looks at the key components of regional policies in turn, namely infrastructure, human capital development and measures to promote innovation. Finally, the chapter discusses how the principles of the new approach to regional policy have influenced policy shifts in urban and rural development.
MAIN POINTS

- Regional policy has been evolving from short-term subsidies into a much broader family of longer-term development policies designed to enhance regional competitiveness.

- Equity and efficiency are not mutually exclusive objectives, and regional policy should aim to address both concerns.

- In the context of strategies to promote growth, governments are increasingly realising that investing in the regional dimension of innovation is crucial.

- There is no single policy formula to promote innovation in all regions, but more systematic policy analysis is required to understand which region-level instruments generate innovation and where.

- Despite economic and demographic challenges, rural regions are not synonymous with decline. New rural policy aims at valorising under utilised resources and opportunities while preserving the environment and adjusting to an ageing demographic structure. Innovative public service delivery plays a key role.

- City competitiveness is high on the policy agenda. Ensuring a clean and attractive urban environment is increasingly recognised as an integral aspect of the creation of dynamic cities rather than a mere offsetting of their undesired consequences.

- Sustainable growth in cities and climate change are the key urban development challenges.

The current state of regional policies – a paradigm shift, but pressure for more reform

There is a widely held view that balanced growth can be achieved by promoting faster economic growth at national level, with automatic adjustment mechanisms generating pressure for convergence across regions in terms of level of development (Williamson’s formulation of the Kuznets inverted U curve). However, there does not seem to be a natural correlation between national growth and regional convergence. Empirical evidence suggests that convergence occurs slowly, if at all. New economic geography models, by contrast, even predict that in some cases the flows of investment and workers between regions reinforce rather than reduce concentration and, therefore, disparities. All of this has provided a challenging environment for regional policy over the past few decades.
Regional policy began in most OECD countries in the 1950s and 1960s, a period of relatively strong economic growth, fiscal expansion and low unemployment. The principal objective of the measures that were introduced was greater equity and balanced growth in a period of rapid industrialisation. The main instruments used were wealth redistribution through financial transfers by the national government accompanied by large-scale public investments. During the 1970s and early 1980s, successive economic shocks and changes in the global economy led to the emergence of geographical concentrations of unemployment in many countries, and regional policy evolved rapidly to address this new challenge. In the earlier period, the focus was on reducing disparities (in income, in infrastructure stock, etc.), and subsequently widened to include employment creation. The guiding theoretical assumption in this case was that public policy could alter supply conditions (essentially by changing production cost factors through production subsidies and incentives) and thereby influence industrial (re)location decisions, both with respect to existing firms and new investments.

Overall, the results of these policies were disappointing. Regional disparities did not reduce significantly, appearing as entrenched as ever in many countries despite significant injection of public investment. At a regional level, the success of these policies in restructuring the economic base of the target areas was also limited. Attraction of inward investment illustrates the limitations that regional policies came up against. Many governments attempted to attract foreign direct investment (FDI) into target regions in order to create employment, but also assumed that spillovers would benefit local enterprises, increasing their technological and organisational capacity. However, experience suggests that in many cases the facilities brought into the region accrue little for the local economy in terms of productivity gains among local enterprises. Often, these branch plants are weakly embedded in local production systems generating very low levels of local supplier linkages. Most foreign-owned subsidiaries show weak innovation tendencies, and very few conduct R&D or have linkages with the local innovation system, preferring to retain their R&D in their main country of origin (Pavitt and Patel, 1991).

In response to poor outcomes, regional policy has evolved and is evolving from a top-down, subsidy based group of interventions designed to reduce regional disparities, into a much broader “family” of policies designed to improve regional competitiveness and characterised by: 1) a strategic concept or development strategy that covers a wide range of direct and indirect factors that affect the performance of local firms; 2) a focus on endogenous assets, and less on exogenous investments and transfers; 3) an emphasis on opportunity rather than on disadvantage; 4) a collective/negotiated governance approach involving national, regional and local government plus other stakeholders, with the central government taking a less dominant role. The rationale of the new regional approach is based on the principle that opportunities for growth exist in the entire territory, across all types of regions, as documented in Chapter 1. The aim is to maximise national output by assisting and encouraging each individual region to reach their growth potential endogenously, and thus it departs from the old view which regards regional policies as a zero sum game (see Table 2.1 below). Evidence of this so-called "paradigm shift" in regional policy can be seen in recent reforms of regional policy in a number of OECD countries.

Regional policy has become a more central element of policy making in OECD countries in recent years, after having been marginal for a long period of time. Over the past decade, the future of regional policy has been subject to debate, formal review and/or new legislation and the introduction of regional development programmes in many
OECD countries. Some examples include Finland’s Regional Development Acts (2002, 2007), regional growth agreements and a new regional governance architecture in Sweden, a new regional development law in Switzerland (2008), strengthening of the regional development agencies in Canada, development of regional plans and devolution of powers to regions in Italy, RDA-led regional strategies in England and specific strategies in Scotland, Wales and Northern Ireland, Peaks in the Delta in the Netherlands, EDA-led regional competitiveness programmes in the US, area agreements and regional partnerships in Australia and EU-sponsored regional development strategies for its members supported through the 2007-13 Structural Funds. In Japan, the Urban Renaissance Programme (Box 2.1) is a good illustration of the evolution of policy from top-down, infrastructure driven and lagging-region focused projects to more integrated and market oriented approaches to solve national growth challenges. There is widespread evidence of new policy thinking and an identifiable shift in the "paradigm" of regional policy. The detailed nature of change is clearly country specific, but there are common features, as shown below (Table 2.1).

Table 2.1. Old and new paradigms of regional policy

<table>
<thead>
<tr>
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<th>Old paradigm</th>
<th>New paradigm</th>
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<tr>
<td><strong>Objectives</strong></td>
<td>Compensating temporarily for location disadvantages of lagging regions</td>
<td>Tapping underutilised potential in all regions for enhancing regional competitiveness</td>
</tr>
<tr>
<td><strong>Unit of intervention</strong></td>
<td>Administrative units</td>
<td>Functional economic areas</td>
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<td><strong>Strategies</strong></td>
<td>Sectoral approach</td>
<td>Integrated development projects</td>
</tr>
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<td><strong>Tools</strong></td>
<td>Subsidies and state aids</td>
<td>Mix of soft and hard capital (capital stock, labour market, business environment, social capital and networks)</td>
</tr>
<tr>
<td><strong>Actors</strong></td>
<td>Central government</td>
<td>Different levels of government</td>
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Source: OECD Territorial Reviews
Box 2.1. Private investment-led regional development: Japan’s Urban Renaissance Programme

After the so-called bubble economy burst in the early 1990s, Japan fell into a deep recession. Although Japan introduced a massive economic stimulus package of public investment, the economic slump set in and tax revenues to fund public investment fell sharply. For example, Japan’s tax revenues (general account) were 60.1 trillion yen in FY1990 but fell to 43.3 trillion yen in FY2003.

To help jump start the economy, the Urban Renaissance Special Measures Law was enforced in 2002 to shift urban investment policy from conventional, large-scale and direct public investment, often in rural or peripheral regions, to a policy that focused on promoting private-sector real estate investment with incentives provided by the public sector, notably deregulation, relaxation of land use controls and faster approval procedures for projects. The objective of the plan was to move the focus of regional policy away from a top-down, lagging regions approach, to one that was more market oriented and that emphasized promoting growth where potential seemed highest.

An important aspect of the policy was its emphasis on integrating policies from different sectors. The Urban Renaissance policy covers not only urban development, but also a range of sectors including employment and industry with several central government agencies involved. For this reason, the Urban Renaissance Headquarters was established directly under the supervision of the Prime Minister, thus creating a strong, comprehensive government framework for promotion.

So far 65 districts have been designated as urban renaissance urgent development districts, and various projects are underway. In those districts, the value of private-sector investment is estimated at approximately 12 trillion yen, with an estimated 23 trillion yen in economic impact. For example, one of the biggest projects aims to bolster Tokyo’s international finance hub in the Otemachi-Marunouchi-Yurakucho Region of Tokyo. In the project, construction and renovation of approximately 100 business, commercial and hotel buildings is underway.

Environmental sustainability has recently become a core focus of the Programme. In another project covering the Tokyo Midtown area, a new environmentally-conscious business and commercial facility was completed in March 2007 to demonstrate how technology could be used to make urban development compatible with ecological targets. It employs approximately 20,000 people and about 35 million people have visited during the first opening year (March 2007-February 2008).


Countries have moved in the direction of adopting the “new paradigm” for regional policy at different speeds. The paradigm represents one end of a continuum of approaches currently underway. To what extent have countries implemented policies and programmes in line with the new paradigm? Reforming regional policy, as with other economic structural reforms, has to achieve not only a short term goal of efficiency but above all has to increase the dynamic capacity of economic actors to adapt to the turbulent global environment. However, reforming policy encounters different forms of resistance and, in particular, collusive and rent-protecting behaviour. In a process of policy change, “losers” and their losses might be more quickly and easily identified than “winners” and their gains, which can be slow to emerge. Policy prescriptions
encompassed in the paradigm shift present different requirements that could encounter resistance to implementation.

Moreover, even though the objectives of regional policy have evolved, there are nonetheless criticisms that this evolution has not gone far enough and/or that the continuing existence of support for specific regions is inefficient, even where this is not the primary target of the policy. Some recent studies criticise the provision of economic assistance as a priority to less developed regions. They argue that government expenditure in favour of lagging regions diminishes performance in the growth poles of an economy – which are assumed to be the wealthiest regions. However, insofar as there are underutilised resources in lagging regions, mobilising them will contribute to both equity and national development objectives (Box 2.2). Evidence in the previous chapter showed that lagging regions generate an important part of national economic growth; where they underperform, national output suffers. As such, there are clear arguments to support specific actions to support regional development, but these must be able to be evaluated against other uses of public funds (notably the use of resources to support individuals rather than places).

Box 2.2. The equity-efficiency trade-off

- **Redistributive approaches for equity purposes aim at reducing (financial) disparities among people, and places (when sub-national authorities are responsible for basic public services).**

- **Selective approaches for efficiency and competitiveness purposes aim at fostering growth in places that might already be relatively wealthy. They are increasingly based on the acknowledgment of agglomeration effects.**

- **In practice, equity and efficiency policies can be complementary:**
  - “Increasing returns to adoption”: positive externalities associated with growing number of users characterise knowledge economics. This is obvious in the case of network technologies. It is also the case with education since the larger the number of diploma holders, wherever they study, the better the national innovation capacity. Similarly, the greater number of people receiving health treatment, the better it will be for the whole population. Thus equity in public spending can create efficiency.
  - “Decreasing returns to investment”: an excessive concentration in the allocation of public spending will meet limits in its ability to produce additional results. For example, in France, Grandes Ecoles students are few in number, but and they receive far more public spending per student than for university students. The average results are lacklustre. Again, more equity in public spending can raise efficiency.

“Dynamic perspective” investment in already wealthy regions with favourable growth potential can lead later to extra wealth which could then be redistributed. Similarly, efficiency in public spending (either by limiting the cost of public policy, for the same results, or by improving its outcomes) could increase resources available for the equity objective.

Source: OECD Territorial Reviews

This new thinking in regional policy concerns not only the most developed countries, but developing countries as well. The challenge for non-OECD countries is often to manage rapid industrialisation and urbanisation through active regional intervention, but without repeating the mistakes made by some OECD countries in the period when there was an attempt to artificially redefine economic geography through major public
investments. So, the new paradigm in regional policy – an emphasis on market mechanisms, endogenous growth, on collaboration across levels of government – has clear relevance for these countries. The challenge is in the implementation, both because of the scale of the challenges (e.g. in China, see Box 2.3) or the centralised nature of the administration (e.g. in Chile).

**Box 2.3. Regional development challenges and responses in China**

Between 2000 and 2007, China achieved a GDP growth rate of 10.3% annually which is significantly higher than the target of around 7.5% included in the 11th Five-Year Plan for the period 2006-2010. The lower objective reflects partly the expectation in 2005 of a moderate fall of global economic growth, but also a new policy orientation which emphasises a sustainable and co-ordinated “scientific development concept” as well as social welfare and a more equal income distribution within a “harmonious society”.

The aim of these theoretical concepts is a more balanced rural-urban and inter-regional development, responding to the fact that the development process has lead to increasing gaps between the coast and interior regions, and between rural and urban areas, which has triggered social tensions and conflicts.

The response of the Chinese policy makers’ to these regional development challenges includes the adoption of three broad regional strategies: the “Western Region Development” plan (initiated in 2000) including 12 provincial-level territories in western China, the “Revitalising Northeast China and Other Old Industrial Bases” (2003) programme mainly targeting three north-eastern provinces, and the “Rise of the Central Region” plan (2006) concerning six central provinces behind the coastline areas. These broad regional programmes have led to adjustments in fiscal transfers from the central government and to special programmes or investments managed by the centre. In addition, in 2006, the government adopted a programme targeting rural areas and listed as a priority in the 11th Five-Year Plan, “Building a New Socialist Countryside”. This strategy includes measures aiming at agricultural productivity, land use, rural residents’ income, local governance reforms and the delivery of rural public services (health care, social security, education, financial services…) and infrastructure. Other initiatives have been introduced, such as the regional planning exercises developed for the Yangzi river delta, the Pearl River delta, the Jing-Jin-Ji area (Beijing, Tianjin, Hebei) and the Chongqing-Chengdu corridor, and more generally China’s urbanisation strategy.

Indeed, urbanisation has remained a mighty force behind China’s economic growth, with 132 million (2006) rural migrant workers leaving their homes (71% of them moved to urban areas), distorting the demographic composition of rural areas, but also having positive impacts on rural income, consumption and investments. Regional development programmes risk being affected by multi-level governance problems as the division of responsibilities across levels of government is not always clearly defined. Moreover, in spite of increased transfer payments, gaps between expenditure and financial resources of sub-national levels of government are rising. Governance dysfunctions particularly on sub-national levels of government negatively affect the regional development dynamics and risk making the implementation of effective policies more difficult.


The challenge of diagnosing regional needs and designing relevant policies

Enhancing the impact of regional development policies is, however, complicated because the factors that determine the competitiveness of each region are so diverse. Nonetheless, the work of OECD, through national territorial and region-level policy reviews, in line with the analysis in the previous chapter, suggests that despite the broad range of potential attributes that contribute to or detract from the competitiveness of a region, a small number of generic success factors appear repeatedly. These factors can be grouped under three broad policy families:
The capital stock dimension: essentially the level of past and present investment in a region’s infrastructure. From a regional development perspective in OECD countries this has tended to mean transport infrastructure, while in less developed countries it also implies infrastructure for basic needs. More recently, ICT infrastructure has become a key target.

The labour market dimension: this includes policies relating to both the labour market – for example, (dis)incentives for labour mobility and participation in the labour market – and human capital development.

The business environment dimension: this covers a range of policies designed to support firms, such as cluster policies, policies to promote links between research and industry, and, in particular, promotion of innovation in regions.

The assumption of the new regional policy paradigm is that implementation of regional development policies involves integration of these core sectoral policies. The emphasis on the quality of the local environment for business leads directly to the question of the quality of locally provided services and public goods. Firms, especially SMEs, are dependent on the environment in which they are located to provide them with different types of “local collective competition goods”. This involves the participation of various categories of actors such as public authorities at local, regional and central levels, private firms or non profit organisations, etc. to ensure that the provision is appropriate, relevant, high quality, etc. For example, regional innovation systems are based on relations between industry and universities, between small and large enterprises, and between sectors (e.g. training and employment).

In terms of policy implementation, OECD work has also highlighted the important place of both urban and rural policies within the regional policy “family” and the evolutions of policy thinking in both domains. At its broadest level, this means a distinction between rural and urban policy. Increasingly, however, within both rural and urban policy families there is a differentiation of policy according to the specific nature and needs of individual regions. For example: urban policies distinguish between large metro-regions and smaller urban centres or cities in industrial transition; rural policies differentiate among lagging and dynamic remote regions and urban fringe or well-connected rural regions. Given that many administrative regions include both urban and rural areas, the issue of urban-rural linkages and complementarities is also crucial.

Thus, the framework for regional policy can be seen from two complementary perspectives: firstly, a range of old and new policy tools (infrastructure, innovation, etc.) and secondly, policies adapted to specific region types (urban, intermediate or rural). The following sections explore the evolution of policy in these different fields and highlight some principal OECD findings.

Infrastructure investment – a necessary but not sufficient condition for regional growth

Investment in physical capital has always played a prominent role in regional policy. Many national government policies have tried to reduce disparities by reducing travelling times from the target region to other regions and by eliminating gaps in telecommunications networks. Recent examples of this approach include Mexico’s Plan-Puebla-Panama or the EU-TEN transport corridor programme. The expectation that improvements in physical infrastructure will generate productivity gains for local
businesses and increase the attractiveness of an area for investment has been a recurring theme in OECD reviews. High quality infrastructure and services are accepted as being vital to a strong economy - locally, regionally and nationally (Figure 2.1). To take the example of transport, upgrading infrastructure changes access (travel times) which, in turn affects property prices and economic rents, influences decisions of households (residential location, patterns of consumption) and firms (production location, access to markets and investment decisions) and these, in turn, should have a net positive impact on the economy, increase tax revenues, create employment and generate resources for further investment. For business, the benefits could include:

- Access to a wider labour market pool, with more diverse competencies;
- Faster access to suppliers and customers, which reduces transaction costs;
- Expanded market reach, including choice of suppliers, as well as expanded customer base;
- Reduction of land use constraints.

**Figure 2.1. Transport infrastructure investment and economic growth effects**

![Transport infrastructure investment and economic growth effects diagram](image)

*Source: Adapted from Larkshmanan, (2002)*

As an illustration of the above, the OECD review of regional policy in the Czech Republic (OECD, 2004) strongly emphasised the importance of adequate domestic and international road and rail connections as a means to improve the competitiveness of large parts of the country. For example, it highlights the accessibility issues for Ostrava, third city in the country, which is still not connected to the rest of the highway network, thus stifling the development efforts of an industrial area undergoing deep restructuring and
experiencing high unemployment. Poor accessibility prevents Ostrava, and more generally the region of Moravia-Silesia from attracting a more sizeable share of FDI in spite of its assets (human capital, excellent university and research centres) and strong financial and other incentives for investors.

Similarly, in Poland, a main focus of regional policy since 2004 has been road development (expressways, motorways, national roads). Major EU transport infrastructure investments have concentrated on Poland because it is crossed by four out of the ten pan-European transport corridors. One of Poland’s critical priorities is to create an effective network of motorways connecting the country’s major urban centres and connecting these with the Trans-European Transport Networks and to improve road-bearing capacity and quality. The focus on roads has continued in the 2007-13 regional development strategy: 51.7% of total funds for the infrastructure programme (including co-financing) are allocated to road development (EUR 11.2bn from EU funds and EUR 1.98 bn from national funds), while 21% is for rail transport and 13% for urban transport. In the regional programmes, 26% of the funding goes to transport (EUR 4.4 bn out of a total of EUR 16.6 bn), (OECD 2008, *OECD Territorial Review of Poland*). However, the review also notes the efforts of the Polish national and regional authorities to adopt a balanced policy-mix for regional development, focusing on transport, but also human capital and innovation and to maximise the economic multiplier from the huge infrastructure investment, through integration with other policies (Box 2.4).
Box 2.4. Eastern Poland development programme (2007-2013)

The development of Poland’s eastern regions, the poorest in the European Union in terms of GDP per capita until the accession of Romania and Bulgaria, is a major policy objective of Poland and the European Commission. The five eastern regions situated along Poland’s eastern and northern borders are the smallest contributors to GDP (less than 3% each) and have the lowest growth rates in Poland.

A macro-regional programme targeting the development of the five eastern regions has been developed with the EU funds for 2007-13, co-financed with national funds. An additional budget of EUR 2.2 billion has been allocated by the European Commission for Poland for this purpose. This is the first macro-regional programme of this type in the European Union. Previously, several programmes had been implemented for eastern regions, but they targeted specific regions/locations rather than the macro-region as a whole. The macro-regional programme is an opportunity for eastern regions, not only in terms of additional funding, but also in terms of co-operation and connections among the five regions, to address under-used potential (such as environmental assets and tourism), develop transport networks within the area, and elaborate a common strategy for cross-border co-operation. The value added of the programme lies precisely in its macro-regional dimension, as it is a way to go beyond the administrative borders of voivodships (regions).

The Eastern Poland operational programme is managed by the central government (Ministry of Regional Development). It aims at enhancing the attractiveness of eastern regions, strengthening the metropolitan functions of cities and improving the quality of transport infrastructures. The programme has a well-balanced strategy, with six priorities (modernisation of the economy, infrastructure and information society, transport infrastructure, support to cities, tourism and technical assistance); and aims to integrate various sectoral policies in a territorial perspective. However, challenges are linked to the insufficient cross-regional common vision of the various pillars; and to the limited involvement of local actors in the design of the programme.

Development of eastern Poland: allocation of funds 2007-13 (total: EUR 2.2 billion)

OECD reviews suggest, as does the analytical work presented earlier, that the construction or upgrading of transportation infrastructure can undoubtedly have a positive influence on a region’s economic development, but economic growth is not automatic. Growth effects are likely to appear only when positive externalities exist in the region.
Faster transport connections can potentially incite positive externalities that exist in various markets – typically unexhausted economies of scale, scope, agglomeration, density or network – and consequently improve (labour) productivity, enhance output, reduce production costs and promote more efficient use of resources. If such latent economies do not exist, however, improvements in accessibility could lead to changes in existing transport flows and spatial patterns without having long-term effects on growth.

The OECD review of the Öresund region (OECD 2003) underlines that the bridge between Copenhagen and Malmö is only one element in a wider strategy to build on the complementarities that have developed between the two regional economies (Box 2.5). The challenge for policy makers explicit in the recommendations is to ensure that the potential in the labour market, research community, and enterprise systems is realised. The review of Vienna-Bratislava provided a similar example: providing infrastructure to link the two centres will not necessarily generate sustainable growth unless policy challenges relating to economic specialisation, innovation and governance could be resolved.
Box 2.5. Impacts of the Öresund bridge on attractiveness and competitiveness

Three territorial levels of impact should be considered: the regional level, the national level and the international level. At each level, the effects are different and more importantly, the reactions of stakeholders are quite diverse.

At the regional level (Öresund), the new infrastructural links – in addition to the bridge – have framed a new internal network of mobility and communication which has increased interactions among people, firms and institutions. Such interactions increase the “value” of internal interdependence as a factor of robustness of the local economy and society in terms of competitiveness and attractiveness. The main feature of this evaluation is identifiable in the strengthening of the two main poles, Copenhagen and Malmö, but that growth has also affected a multiplicity of areas within the region. Thus, on both sides of the Strait, the spatial “continuity” between cores and hinterlands causes fewer problems today than in the past.

The competitive role of the Öresund Region has also affected its relative position within the two countries. This is a relatively minor issue for Denmark, where Copenhagen, as national capital and already a main pole of attraction in the Öresund Region, saw this role gain in importance. However, in Sweden, the growth of the Öresund Region will inevitably have a more significant impact. Stockholm and Gothenburg in particular have felt the impact of the growth in the Öresund region and are reacting to its increased competitiveness. On the one hand, the strengthening of the position of Malmö and Skania has led to a new development area in Sweden, increasing overall country output. On the other hand, the acceleration of growth in Southern Sweden has upset traditional political thinking on regional policy in the country. Indeed, due to its marginality, the North had always been in a privileged position for the allocation of “regional” subsidies, in comparison with the central part of Sweden (along the Stockholm–Gothenburg axis) which was self-sufficient, and the South, which, despite the industrial decline in Malmö, had always been considered as “developed” and was not in need of any particular intervention. The opportunity represented by the growth of the Öresund Region has brought about a change in this approach. The political orientation towards favouring equality rather than supporting dynamism is slowly reversing and, as a result, greater attention is being paid to the Southern part of Sweden (also because this area of the country is the link with the rest of Europe).

The third territorial level of competitiveness, which is indirectly enhanced by the infrastructural investments in the Öresund Region is on an international scale. The fact that Copenhagen and Malmö are increasingly considered as a joint global hub and have risen in the European hierarchy of metropolitan areas is indeed playing a significant role in the competitive growth of the region. The most significant element of this increase in competitiveness is the international integration process. Comparable experiences are the Channel Tunnel between France and Great Britain, and the new highway system planned between Vienna, Prague and Budapest.


If regional policy concentrates only on providing capital in the form of infrastructure, a lagging region may end up losing economic resources (the “leaking by linking” phenomenon described by Hirschmann [1958]). By reducing inter-regional transport costs, firms continue to find it cheaper to concentrate in the core regions, reap the benefits of agglomeration economies and thick markets and ship the goods to the periphery. For example, improved motorways in eastern Poland will enable goods to reach foreign markets faster and at lower cost, but competition from other parts of Europe will also increase for firms located in eastern Polish regions (OECD 2008, OECD Territorial Review of Poland).
This raises the issue related to agglomeration often termed “the privatisation of benefits and the socialisation of costs”. This refers to the fact that cities can continue to grow to a point at which they generate net costs for the society as a whole (pollution, congestion, crime, etc.) while they continue to generate benefits for (some) firms. Thus the process of concentration goes on, with society paying an increasingly high price for this concentration.

Whether transport infrastructure becomes a link or a leak depends on a broader strategy - regional policy - that takes into account labour and business dimensions. Infrastructure provision is a response to a market failure: private agents will under-provide or not provide infrastructure. The type of infrastructure thus depends on the nature of market failure. If the infrastructure is a natural monopoly, the private sector would provide it at a lower quantity and at a higher price than the social optimum. The channels through which infrastructure can have an impact on growth are many. Besides new markets and increased competition, it can facilitate the division of labour and therefore specialisation, assist in the diffusion of technology, and complete value chains with intermediate inputs in other regions. At a national level, energy infrastructure, being linked to productive capacity, has been associated to growth in the OECD (OECD ECO, 2008). As noted earlier, the results from OECD (ECO, 2008) are in line with the findings of this report, namely that transport infrastructure needs to be associated with human capital and innovation (more broadly the business environment) for it to have an impact on growth.

Furthermore, constraints on infrastructure development are growing. In particular, the cost of developing new infrastructure has increased dramatically, while maintenance represents a significant share of total infrastructure spending in OECD countries. In Japan, for example, projections regarding the proportion of total investment that will need to be spent on maintenance suggest that in the relatively near term, expenditures on renewal of infrastructure will equal expenditures on new facilities. Assuming limited increases in total spending, Japan's maintenance budget is likely to overtake the budget for new construction in the next decade (OECD, 2005). In consequence, infrastructure investment policies in the OECD tend to emphasise three aspects: better use of existing infrastructure, better targeting of new investment and mechanisms to increase the level of private sector financing in public projects.

**Investing in people, providing jobs, without restricting mobility**

Even more important than infrastructure, according to the regional growth model described in Chapter 1, human capital stands out as a main determinant of regional performance, both as an advantage for regions with a highly educated workforce and as a competitive disadvantage in regions with low educational attainment. Evidence derived from the econometric analysis shows that human capital plays a significant role in enhancing regional growth. This implies that regions where unskilled labour is relatively abundant are likely to be disproportionately affected by skill-biased technological change and vice-versa.

The analysis in the previous chapter showed that, in general, lagging regions have substantial reserves of un-mobilised labour, indicated by high unemployment rates and low participation rates. Their labour markets function sub-optimally over long periods of time without obvious adjustment in terms of either wage rates or out-migration. Hence, there is a structural problem with labour markets in a large number of regions. If the
potential supply of labour is chronically higher than the average demand, this suggests that the price of labour is too high, or (what amounts to the same thing) that the human capital and skill sets of all those who would be willing to work is too low at the margin to interest potential employers. Moreover, even where incentives for individuals to move to regions with higher demand exist, they do not do so, or not in large enough numbers.

The policy implications are twofold. The first concerns the room for manoeuvre for labour markets to adapt to local conditions. Despite reforms over the past decade in many OECD countries, there remain major barriers to flexible labour market operations. Some level of constraint on the totally free workings of the labour market can easily be justified on social grounds, as well as on grounds of market failure and information asymmetries. Overall, however, the experience gained in the course of the OECD Jobs Study and its follow-ups shows that more flexible labour markets reduce unemployment and create jobs. Employers are more willing to hire, employees fear unemployment less because they are confident of getting another job, and more people at the margins of the labour market gain job experience that makes them more attractive to potential employers. Hence part of the solution for mobilising regional labour reserves in some countries must include reforms of national labour market legislation to make inactivity less attractive, and agreements that allow wages to more accurately reflect regional (and enterprise) conditions.

Recent challenges brought by pressures of population ageing, changes in technological advances, globalisation and integration of the labour intensive countries have changed the policy priorities from cutting high and persistent unemployment to removing barriers to labour market participation. The main objectives in the restated OECD Jobs Strategy (Box 2.6) of reform is to raise employment by reducing unemployment but also by allowing people to move from inactivity into work. Labour productivity can suffer from pro-employment policies in the short run through a composition effect as low-skilled workers enter the labour force. However, in the long run, when reforms to reduce impediments to labour market participation, and to remove demand-side barriers are supplemented with policies to improve the skills and competences of the workforce, labour productivity will increase. The restated OECD Jobs Strategy is an integrated policy which combines labour market and human capital development policies. Regional polices can assist horizontal coordination through multi-level governance mechanisms.
Box 2.6. The Restated OECD Jobs Strategy

The sharp rise in unemployment rates in many European countries during the early 1980s presented a clear policy challenge to cut the high and persistent rates of unemployment. Initiatives such as the OECD Jobs Strategy in 1994 responded to this need with a list of 10 policy recommendations.

Fourteen years later the external conditions and trends in labour markets have evolved, and although rates of unemployment still remain high in several countries, labour market conditions face new challenges mainly the ageing population, changes in technological advances, globalisation and the integration of the labour intensive countries. The restated OECD Jobs Strategy proposes four main lines of actions or pillars to meet these new challenges.

1. Macroeconomic policies must ensure price stability and the sustainability of public finances. The stability of the macroeconomic framework must make it possible for reforms to produce their effects in terms of job creation as quickly as possible, while at the same time reducing the risks of permanent falls in employment in the event of recession.

2. The second line of action is to promote participation in the labour market of the least represented groups. To do this, it is essential to reform the rules on payroll taxes and welfare benefits. To be attractive, work must pay. Unemployment benefit systems and active labour market policies must also facilitate and support the quest for jobs, and lastly policies must be adopted to help the work/family life balance, by providing for child-care services.

3. The third pillar concerns the reform of the regulations on labour markets and markets in goods and services, since this plays an important role in creating jobs and mobility. Reforms in this area have proved difficult since they are often perceived by workers as a threat to job security.

4. The last line of action involves human capital, concentrating on promoting education systems which, beyond providing basic schooling, should also encourage close links between education and work. Such systems facilitate the transition between school and working life, and reduce youth unemployment. In addition the most highly-educated workers have the best employment prospects. Lifelong learning does not just promote growth and employment alone; it is also a factor for social progress.

The restated Jobs Strategy must be adapted to different national social preferences since there is no one path for reform: some successful countries, such as the United States, combine low welfare benefits and payroll taxes with fairly light job security legislation.

Other countries such as Denmark and the Netherlands, offer generous welfare benefits while at the same time imposing strict obligations on job-seekers to actively look for work. In these countries, employment levels are high and income disparities low, but the budgetary costs involved are considerable.


Labour is neither fully fixed nor fully mobile because of systemic and personal barriers to migration.2 Standard neo-classical theory treats labour as mobile, and in many theories capital is considered to be fixed. In reality, both factors are quasi-fixed in the short-term, and in the long-run it is not clear whether mobility is fully achieved in either
case (Oi, 1966). Economic intuition says that labour responds to wage differentials among regions. In the case of the US, traditionally the exemplar of high labour flexibility, labour mobility is positively associated with unemployment rates, implying that American workers respond to job opportunities elsewhere by moving, though even here mobility is sticky (see Appendix 5 for more data on this issue). In most other countries, labour mobility is relatively low and represents a very imperfect adjustor to changes in the labour market. The conclusion is that strengthening regional labour markets will normally be a more successful policy option than encouraging people to move.

The second policy implication is that policies should address educational attainment and skills orientation in poor-performing regions. Investing in human capital is a key element of public investment for regional development. For a long time, it has been neglected in regional policies in favour of investment in hard infrastructure. Now the situation has changed radically, with human capital development being a core component of spending within regional strategies. For example, in line with the Lisbon Strategy objectives, EU structural funds in Poland are being channelled towards improving human capital (education attainment and quality of education) through the Human Capital Operational Programme that accounts for 14% of the funding (OECD, OECD Territorial Review of Poland). Similarly, the EU has approved Portugal’s National Strategic Reference Framework which enables the country to allocate almost 30% of EU structural funds to human capital development (OECD, OECD National Territorial Review of Portugal). Chile is another country that has made generalising access to quality education a national priority, including efforts to ensure that municipalities with limited fiscal resources are also able to improve educational provision (Box 2.7).

Often, however, the regional development dimension of educational provision has to address the concern that, by diffusing provision widely across the territory, quality is reduced and costs increase. If policy objectives are geared towards providing an equitable access, the system will find difficulties in replicating quality training everywhere. In addition, an equity-oriented system may run the risk of up scaling human capital in less favoured regions only to see a brain-drain towards more successful ones. In contrast, the result of a system oriented towards elite systems is likely to directly favour core regions. One possible solution to the problem is, in addition to setting up a system that is both equitable and qualitatively sound, it also takes into account part of the population that is highly attached to their regions of origin. Adult learners usually have links to a specific locality, and therefore are less mobile than younger students. Upgrading their skills will thus have a more direct effect on the region’s economic performance. Programmes should be flexible enough to spur on-the-job learning such as in the French Conventions CIFRE or the British Knowledge Transfer Partnership, e-learning and distant learning frameworks, to take into account non-traditional learners, those who combine work and study, and the needs of the employers.
Box 2.7. Generalising access to education in Chile

The economic value of ensuring good access to quality education at all levels for all citizens has been recognised by the government of Chile, which has made improving Chile’s human capital a priority in its efforts to encourage growth in the medium and long term. The section of Chile’s population aged between 25-64 had, on average, benefited from less than 10 years of schooling in 2002, compared with the OECD average of nearly 12. In addition, the quality of education in Chile is also below OECD standards according to PISA international standardised tests. Tertiary education rates also remain below the OECD average. Overall income and territorial inequalities are closely tied to inequalities in access to education. Those in the top quintile of income earners have close to five more years of education than those in the bottom quintile. At the same time, standardised tests of education performance (SIMCE results for primary and secondary education) reveal that students from the poorest families perform worse than those from families with higher incomes. Close to 70% of the poorest students attend municipal schools and challenge the capacity of municipalities to provide adequate primary and secondary education, one of their main devolved responsibilities. Moreover reasonably qualified students from low and middle income backgrounds who could be successful in university have restricted access to higher education because of financial barriers to entry (OECD, 2004).

OECD (2009), Territorial Review of Chile.

The key question for regions is to find policies that can encourage, retain and attract human capital despite strong competition for increasingly mobile skilled workers. It is unavoidable, however, that spillovers from one region to another will dilute the direct impact of educational investment or job creation within the region making the investment. These spillovers can be quite large, and, where they favour core regions, can also sometimes run counter to policy aims such as that of reducing concentration or diffusing economic activity more widely.

Despite globalisation, proximity still matters – promoting innovative regions

If the regional business environment is not dynamic and innovative, economic benefits from infrastructure and human capital investments are unlikely to accrue in the target region: infrastructure will promote leaking and trained individuals will move to where more dynamic businesses are located. Therefore, the third dimension is crucial for an effective regional policy. Regional policy has always had an objective of promoting private sector activity. In the past this has often been focused on bringing in FDI and providing subsidised facilities for investors and/or for new firms. More recently, the focus has moved to making domestic firms more competitive, and this led to interest in cluster policies and similar instruments to build co-operation and exchange among firms, particularly SMEs. The focus has now shifted towards innovation, with the emergence of specifically regional innovation policies.

The importance of innovation as a fundamental cause of growth has long been recognised, and is currently an important theme in the work of the OECD. Its role in regional performance is now also becoming clear (the growth model presented in the previous chapter finds that innovation positively influences regional growth rates).
Two policy considerations appear to drive the current interest in regional innovation:

- Strong dynamics of innovation-generation in regions are crucial for achieving national innovation policy objectives.
- Innovation performance can contribute to improving the overall economic competitiveness of individual regions.

With innovation high on the policy agenda, interest centres on the main factors that propel innovation. It is accepted that innovation is a market-driven process and that firms need to be assured that they will be able to reap the fruits of that innovation process. The main policy issue is how inputs in the innovation process are transformed into successful innovation and why some places seem to do this better than others. The fact that some regions appear to be more innovative than others seems to run counter to assertions that globalisation reduces the importance of distance in business, making it possible for firms to access the inputs and knowledge that they need from anywhere across the globe. Over the last few years, many of the leading firms in "new economy" industries - those driven by rapid innovation in products, processes and commercialisation - have emerged in the same few locations across the world. This contradicts the hypothesis that many of the drivers of economic change (particularly globalisation and technological advances) are "flattening" the world economy.

While successful innovative city-regions such as San Diego, Boston, Stockholm or Eindhoven generate more than 400 patents per million inhabitants annually, other large cities produce less than half that number. More than one-third of OECD regions generate less than ten patents per million inhabitants per year. As shown in Table 2.2, these regions tend to invest less in R&D as a percentage of regional GDP, their firms engage less in R&D, and they have lower shares of total employment in high technology sectors. This suggests a challenge for public policy with respect to how innovation policy is designed and targeted so as to be relevant and effective in different contexts, particularly those for which R&D and patented innovation represent a negligible part of the innovation activity of firms located there.

Table 2.2. Patenting is heavily concentrated and correlated with other indicators of innovation

<table>
<thead>
<tr>
<th>Patents per million, class</th>
<th>Number of regions in class</th>
<th>As % of all regions</th>
<th>Of which, % of the regions that are rural regions</th>
<th>Average expenditure on R&amp;D as % of GDP</th>
<th>Average employment in high technology sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>112</td>
<td>33.43</td>
<td>46.43</td>
<td>0.57</td>
<td>23.26</td>
</tr>
<tr>
<td>10-50</td>
<td>52</td>
<td>15.52</td>
<td>44.23</td>
<td>1.57</td>
<td>28.52</td>
</tr>
<tr>
<td>50-250</td>
<td>85</td>
<td>25.37</td>
<td>41.18</td>
<td>1.63</td>
<td>37.50</td>
</tr>
<tr>
<td>250+</td>
<td>86</td>
<td>25.67</td>
<td>18.60</td>
<td>2.41</td>
<td>43.24</td>
</tr>
</tbody>
</table>

However, even using research-based measures of innovation such as patents, it is clear that location is not a lock-in condition for innovation performance. Overall, patterns of innovation performance change slowly, but some regions have shown strong improvements in recent years. There are clear examples of regions that have progressed from moderate to high performance on indicators of research-driven innovation (e.g. Catalonia, the Basque Country, and Florida). And there are examples of regions that were formerly weakly involved in these activities becoming more integrated into knowledge and research intensive activities (e.g. Andalusia and Galicia in Spain, several regions in
Eastern Europe). In contrast, some of the leading regions, particularly in the US and in Scandinavia, have seen their position decline in relative terms. Again, even with the most recent relative shift of innovation-related investment to specific regions in Asia (e.g. some regions in India and China), there are notable exceptions, with some OECD regions making strong efforts to improve the level of investment and/or seeing improved outcomes from their innovation effort.

Although policies and research have tended to focus on innovation in research hub and success stories, there has been an increase in interest on promoting innovation in areas that are not core R&D centres. Finland introduced a specific urban policy to foster innovation and growth of its eight largest city-regions (excluding Helsinki) in 1994 initially called the centre of expertise programme (CoE), and reshaped under the name Regional Centres Programmes (RCP) in 2001. This policy was a regional policy with a balanced territorial development objective but with a clear recognition that a certain degree of concentration is needed to reach a minimum critical mass in that it includes, as a main objective for the allocation of funds, more collaboration (and thus economic integration) between a core city and its neighbouring municipalities (OECD 2005, OECD Territorial Review of Finland).

A key policy debate that stems from this is whether it is better to concentrate resources in leading regions or use innovation resources to trigger catch up outside the leading regions. The arguments in favour of the former tend to emphasise efficiency and higher returns from research excellence; the counter-arguments emphasise regional development and/or tapping into new ideas and innovative research.

As interest in regional innovation hubs increases, it seems likely that more effort will be made to harness research capacity outside traditional research centres. Either way, if research funding is concentrated, then the mechanism by which innovations and technologies are diffused across the economy becomes crucial. Many countries have technology transfer programmes designed to bridge across industries and between regions. For example, most countries have programmes to disseminate research relevant for farmers (such as biotechnology), mainly developed in cities, out to the rural world.

**Box 2.8. Can regions develop their own endogenous innovation capacity – the case of the US nanotechnology industry**

One way to test how regions become innovation hubs is to look at the evolution of an industry that has few “historical” roots in specific regions. This question can be posed regarding the growth of nanotechnology which potentially has wide cross-industry applications. But does this mean that nanotechnology research and innovation activities will emerge in diverse locations as nanotechnology is developed and applied by a range of institutions and by multiple companies in existing and new industries? Or will it be focused in a small number of clusters where demonstrated capabilities and expertise for high-technology development are already present, as has been the case so far with biotechnology? (Shapira and Youtie, 2008). There are a number of different possible influences – existing government research centres are often the focus for extra nano-related investment by the public sector, or large anchor firms can exert a catalytic effect on nanotechnology research in their immediate vicinity. Research using publication citations in the field of nanotechnology suggests that there are multiple factors associated with the development of nanotechnology research regions that accommodate both the path-dependency course (where existing strengths form the basis for continuing high performance) and the potential for emerging aspirants to become new centres for nanotechnology R&D (Shapira and Youtie, 2008).

Why do some places seem to transform inputs in the innovation process into successful innovation better than others? The ability of and incentives for firms to
innovate are linked to a wide range of factors that are national in scope, such as legislative and macroeconomic settings (IPR and patent law, taxation, corporate governance, exchange rates, tariffs, competition…). But innovation is strongly influenced by region-specific factors (or the ability of firms to access these factors from outside the region). These endowments are physical and human, individual and collective, and found in both public and private spheres. First, innovation depends on the scientific capacity of actors and institutions (their acquired knowledge of existing knowledge and concepts, their openness to new knowledge and ability to assimilate, etc.). But the technological capacity of actors (their capacity to perceive usefulness and applicability of knowledge) is also important. And, finally, industrial capacity plays a role (the capacity of actors to transform concepts and ideas into useful, commercially viable products).

Yet innovation performance clearly depends on more than just the volume of research or the per capita R&D effort made by a region. Most research on the geography of innovation now goes beyond the absolute levels of various innovation-related investments and assets that places possess and looks for more systemic reasons for the relative success of some locations. The common theme is the emphasis on knowledge flows and the concept of spillovers. Some general observations about the nature of knowledge used for innovation support this policy interest:

- Knowledge includes an important tacit component that cannot be easily codified and therefore requires direct interaction, on-the-job learning and workers' mobility to circulate.
- The high degree of uncertainty surrounding innovation activity may be reduced by the exchange of information among firms.
- The complexity of innovation activity requires the coordination of different capabilities and benefits by the possibility of accessing sophisticated complementary inputs.

Recent efforts by both national and regional authorities to develop regional innovation policies have tried to design policy frameworks that can capture these positive externalities by improving the efficiency with which partners interact and share knowledge and by systematising their relationships (the regional innovation system approach). Despite this ongoing evolution in policy thinking, it is crucial to clarify the general “rules” that determine how innovation policy is managed across levels of government. Evidence from reviews suggests that the respective roles of national and regional policies can be described broadly as follows:

- **National policy** sets an “anonymous” framework of regulations and institutions that is designed to shape the policies and initiatives of a wide range of actors towards some general economic and specific S&T related objectives.
- **Regional policies** relate to more or less direct collaboration among identifiable actors and implementation of policy in specific places to achieve specific targets. The role of regional authorities is to offer services and other mechanisms that augment the inter-linkages between all these actors.
The definition above gives the general framework. A closer examination reveals that the multi-level relationship has the following features:

- The national innovation policy-making system guides and defines strategic policy on the assumption that science and technology policy and associated budgets are strategic for a country.
- Research funding priorities are usually set at national level and programmes are designed to allocate most funding according to these priorities.
- University funding and assessment criteria are also usually national.
- Large-scale investments in S&T facilities and equipment (e.g. synchrotrons) are national decisions.
- Finally, informing and engaging industry, research, talent and stakeholders in support of the above is often a national function, via various committee and councils.

Regional innovation-related actions should be complementary and designed so that the level of intervention is appropriate. In general, this means that they are closer to the “output points” of the innovation process.

- Regional activities should be close to the market, assisting firms to translate knowledge into marketed products and services.
- Mostly actively animated by a region-level body, which is often a relatively autonomous agency of a central department or a sub-national authority. These public or private bodies tend to be more hands-on and involve direct engagement with targeted actors (firms in key sectors, HEI, etc.) rather than being services provided to all firms.
- Regional strategies usually involve grants, loans or equity investments to assist firms or support research initiatives (usually where there is some persistent market failure, such as provision of public venture capital or building of business incubators).
- Increasingly, regional innovation policies have international dimensions: developing regional and inter-regional supply chain programmes to enhance innovation by firms in the home region or seeking to attract innovative foreign firms to upgrade demand for innovation from indigenous firms. More generally, regional actors are engaged in learning networks with other regions.

In practice, this still leaves different institutional options for the delivery of policy (Boxes 2.9 and 2.10). Federal or strongly decentralised countries will have some form of constitutional arrangement that devolves powers for important dimensions of innovation policy to sub-national units. The central government maintains some role in providing funding for key sectors or technologies and usually retains a guiding influence over science policy and major funding streams for scientific research. This is the case in the US and Germany, for example. In other countries, where decentralisation is more recent or ongoing, innovation policy is more of a joint responsibility. In Italy, for example, responsibility for innovation policy has been shifted to the regions, but the central government ministries still have important functions. In more centralised countries, the regional dimension of innovation policy remains strongly driven by the centre, with the regions involved in business support delivery (e.g., cluster policies) or more real-estate
based actions such as science parks. Some governments, such as the UK government, have established arms-length agencies to give a more private sector feel to policy delivery while maintaining central government control over how resources are spent. In most countries, a significant trend is the strong desire of regions to be more active in innovation policy and the central place of innovation in regional strategies. This has led many regions and cities to establish their own innovation support agencies, sometimes growing out of SME or cluster support bodies or local development agencies. Prominent examples of such agencies include SPRI in the Basque Country, ASTER in Emilia-Romagna and Bretagne Innovation in Brittany.
Box 2.9. Supporting regional innovation systems: national and regional examples

**National approaches**

- **Encouraging regional innovation strategy development**: The United States Department of Labour has promoted the WIRED programme in an effort to build regional strategies that support labour market development that meets the region’s firm and innovation needs. France, in response to EU evaluations, has been providing technical assistance to different regions to better tailor their innovation strategies to regional specificities. The United Kingdom offered seed funds to help its Regional Development Agencies develop regional innovation strategies.

- **Decentralising innovation support responsibilities**: Through a series of legal changes, Italy has devolved authority for innovation policy to the regions. In practice, only some regions have actively taken on this new role, notably Piedmont and Lombardy. In Spain, decentralisation of responsibilities has also included supporting science and technology. Therefore, the Autonomous Communities are increasingly financing business R&D, public research institutions, technology parks and centres, and other innovation system-building instruments.

- **Supporting innovation hubs**: Finland and now Norway have funded regional Centres of Expertise as hubs for regional innovation systems in different areas of the country. Numerous other programmes across OECD countries are supporting increased collaboration among knowledge generators and firms, including the NRC Technology Clusters Initiatives in Canada, the Innovative Cluster Cities in Korea or the VINNVAXT programme in Sweden. These different programmes combine innovation resources with the regions industrial strengths.

**Regional approaches**

- **Co-ordination**: The regional level (as opposed to the national level) is more suited to bringing actors together in definition of a strategy. While a region may have a few key actors or leaders in the innovation system, in others the landscape can be very complex. One of the core challenges for the Piedmont region (Italy) is to bring together these different actors under a coherent regional strategy.

- **Adapting instruments**: National level instruments tend to be more focused on anonymous framework conditions whereas regions are focusing on instruments that are closer to the market, assisting firms to translate knowledge into marketed products and services. Mexico, having among the highest intra-regional disparities in productivity among OECD countries, requires differentiated regional responses. For example, the state of Yucatán has strong research but there are opportunities to better link this expertise with the agricultural sector. In some Northern border states, such as the state of Chihuahua, they are seeking instruments to capitalise on spillovers from the significant FDI flows to the maquiladora plants and to attract design centres of multi-national firms.

- **Filling gaps**: One of the roles for a particular region is to identify and fill in gaps within the region’s innovation system. In the North of England, the North East region has a thin institutional landscape in terms of firms and has some strong universities but was missing intermediaries. Through their Strategy for Success, the region has supported the development of private closer-to-market, translational, scale-up and demonstration facilities.

*Source: OECD Territorial Reviews and OECD Reviews of Regional Innovation*
Box 2.10. The emergence of a regional dimension to innovation policy in Chile

Chile has made progress towards a territorial approach to regional development. Within this framework between 2006 and 2007 the Chilean government established regional development agencies (RDAs) based on co-operation between the private and public sectors. 15 RDAs have been established, one in each region. The process was directed by the Chilean Economic Development Agency, Corfo, and was co-financed by the Inter-American Development Bank (IADB). One of the main roles of the RDAs is to develop bottom-up regional agendas for productive development based on regional assets, strengths and opportunities. They represent a promising means of creating regional frameworks for business development and public/private partnerships. Within the same context, some programmes are trying to spread the benefits of Chile’s innovation system (strongly concentrated around the capital, Santiago) to the regions. In 2000, the National Commission for Scientific and Technological Research, Conicyt, launched the regional programme on science and technology, which counts, to date, 11 scientific and technological centres in different regions of the country. The objective of this initiative is to stimulate the development of centres of excellence in disciplines or specific areas of research that are consistent with regional assets and advantages. In addition, the launching of the Competitiveness Innovation Fund of Regional Assignment in 2008 appears as a major effort to improve innovation in the regions. The 2008 budget of the Competitiveness Innovation Fund amounted to CLP 80,907 million (more than USD 154.5 million), or close to 30% of total public investment for innovation in 2008. Regions participate in assigning 25% of these resources and thus in decisions on the use of public resources for innovation, giving them the opportunity to link innovation investment to regional priorities.

Source: OECD (2009) Territorial Review of Chile

Innovation through cluster policies remains a popular response

Despite a certain level of "cluster fatigue" in academic and policy circles, national programmes using a cluster model continue to be introduced, and in some cases are becoming more prominent on the policy agenda. The concept of clusters has been adapted and revised in a wide variety of new contexts and is often a bridge between regional policy and national science and technology or innovation policy.

The basic motivations for these policies are numerous. There is strong quantitative evidence that many industries remain relatively concentrated in specific regions. There is also evidence that firms and research generators in proximity can out-perform their counterparts located in less rich environments. Countries are seeking to strengthen or replicate the success factors that have encouraged the emergence of the concentrations of innovative firms in regions associated with the "new economy". They are also looking for instruments that can help maintain employment and promote restructuring and adaptation in other sectors. Finally, trends in regional policy, science and technology policy and industrial/enterprise policy are all promoting the importance of regional actors working effectively together with a goal of greater regional and national competitiveness as well as increased innovation. This increasingly shared perspective is also encouraged by the belief that clusters are a convenient and pragmatic "organising principle" by which to focus resources and build partnerships.

National and EU level programmes to support clusters and regional specialisation originate from one of three main policy families: regional policy, science and technology policy or industrial/enterprise policy. All three policy areas have undergone changes in policy orientation away from a top-down and single sector approach towards policies that favour co-operative, multi-actor and often more place-based approaches, as described in the Table 2.3. These trends have supported increased policy interest in programmes to develop or strengthen regional specialisation and cluster development.
### Table 2.3. Policy trends supporting clusters and regional innovation systems

<table>
<thead>
<tr>
<th>Policy Stream</th>
<th>Old Approach</th>
<th>New Approach</th>
<th>Cluster Programme Focus</th>
</tr>
</thead>
</table>
| Regional policy               | Redistribution from leading to lagging regions    | Building competitive regions by bringing local actors and assets together | • Target or often include lagging regions  
• Focus on smaller firms as opposed to larger firms, if not explicitly than de facto  
• Broad approach to sector and innovation targets  
• Emphasis on engagement of actors |
| Science and technology policy | Financing of individual, single sector projects in basic research | Financing of collaborative research involving networks with industry and links with commercialisation | • Usually high technology focus  
• Both take advantage of and reinforce the spatial impacts of R&D investment  
• Promote collaborative R&D instruments to support commercialisation  
• Include both large and small firms; can emphasise support for spin-off start ups |
| Industrial and enterprise policy | Subsidies to firms; national champions            | Supporting common needs of firm groups and technology absorption (especially SMEs) | Programmes often adopt one of the following approaches:  
• Target the "drivers" of national growth  
• Support industries undergoing transition and thus shedding jobs  
• Help small firms overcome obstacles to technology absorption and growth  
• Create competitive advantages to attract inward investment and brand for exports |

Source: OECD Territorial Reviews

Regional policy instruments for competitiveness rather than equity or other objectives use cluster approaches as a means of aggregating key economic actors in regions. This geographic focus results in policies to promote greater linkages among actors in proximity or to reap the benefits in the region of the knowledge produced there. Innovation is very prominent as an objective in programmes to support specialisation, even in regions where the industry or industries concerned are not those most closely associated with research-based innovation. One of the reasons behind the effort to network actors is to generate innovation, including small-scale, incremental and process innovation. One appealing feature of the approach in the context of regional policy is that it seems to be applied in both advanced regions with dense knowledge infrastructures and in non-core or former industrial regions. For example, in leading regions with a portfolio of economic activities, the policy goal is often to support specialisation in a subset of these sectors or clusters. In other regions, those where traditional manufacturing industries are strongly embedded, cluster policies are designed to help the region diversify into new activities or change the value structure of current specialisations. This shift in regional policy approaches acknowledges that the industrial base in both leading and lagging regions is undergoing transformation and the policies offer one way to improve the linkages and facilitate the transformation.

There remain concerns about the ability of such policies to be effective in a rapidly evolving economic environment; especially since the place of clusters in global value chains is not fully understood. After all, most if not all of the highly coveted innovative clusters, such as those related in ICT or biotechnology, have emerged without specific policies to promote networking or cluster behaviour. Furthermore, clusters built up over decades are transforming rapidly, which makes them difficult targets for policy. Many
regions that historically were production centres in a particular sector are still specialised in that industry, but are also increasingly involved in non-manufacturing or niche activities. For example, car producing regions like Turin, Italy or Gothenburg, Sweden remain in the automotive sector, but new areas of expertise have emerged (transport-related GPS technology and safety equipment respectively). And even some of these upstream activities have begun to be off-shored to lower cost OECD and non-OECD countries. The question for policy is how durable are the competitive strengths on which cluster policies are based, and how can policies avoid locking regions into a strategy that has only short-term value (Box 2.11).

Box 2.11. Cluster policy approaches: lessons learned from OECD work

One of the major challenges to clearly identifying what we have learned about cluster policy is that we lack robust tools to measure whether or not such policies have been successful. Evaluations are not available for all programmes, although several use some sort of evaluation or monitoring component for on-going funding decisions. Possible evaluation methods concern (1) the performance of a cluster or cluster initiative and (2) evaluations of the impact of a particular policy intervention. Both merit stronger analytic frameworks. Despite these challenges, policy learning, even if not through a formal evaluation, has provided some very useful input on programme design and cluster processes. There are also many lessons to be learned in programme design, based on the practices across many OECD countries, that could help at least improve the likelihood that the programmes will be successful in their ultimate goals.

A first set of lessons learned concerns the degree to which these programmes are appropriate, realistic and flexible enough to achieve their goals. First, there needs to be a compelling reason for why a cluster policy, as opposed to another policy that may be open to all firms, is the most appropriate to achieve the stated goals. Often the goals of these cluster-type programmes are broad or vague, seeking generally to enhance competitiveness or innovation capacity. This lack of clarity in turn makes it difficult to select the right targets and establish programme funding levels and duration that are adequate to meet those goals. Given that these clusters may be in different lifecycle stages, region types or sectors, programmes are more likely to be successful when there is a certain degree of flexibility.

A second set of lessons learned relates to policy coherence within and across levels of government. Because these policies are emanating from at least three policy streams, it becomes even more important for policy makers to have a clear understanding of what other policies exist and how they can work together or in a complementary fashion. Given the importance of clusters to a particular region’s economic health, as well as their importance for national competitiveness goals, the policies are developed at different levels of government. The interests of each level, as well as their respective resources and capacity, are important considerations in the articulation of national and regional level programmes.

A third set of lessons learned is about the risks involved in such policies, which are often related to insufficient private sector engagement. The long-term effectiveness of such policies depends on the private sector continuing to act even after a programme ends. Even during a programme period, it is the private sector that is best equipped to react in a timely manner to market changes. Several programme evaluations have noted the excessive public sector role and an unsuccessful public sector exit strategy, if any. There are also general risks for supporting clusters. One common problem is the ability of the public sector to “pick winners.” Other risks include locking in existing clusters and technologies, making it more difficult for other clusters or technologies to develop. Careful policy design can help mitigate these risks if they are explicitly addressed.


A role for higher education institutions in fostering regional innovation

In many regions, the main providers of skilled workers are local universities and colleges. Their role in building human resources for regional development was until
recently somewhat detached from the regional economy itself, being relatively unresponsive to changes in local demand. This situation is, however, changing. Pressures to enhance the employability of university graduates brought workplace skill issues onto the tertiary education agenda. As a consequence, higher education institutions are now called upon for tasks that go far beyond their traditional teaching and research functions, such as regional engagement, urban planning, and, perhaps most significantly, collaboration with firms. Beyond their traditional functions in research and teaching, many higher education institutions (HEI) have now taken steps to respond better to the needs of their regions and to transform themselves into entrepreneurial universities. Table 2.4 outlines the main ways in which higher education institutions interact with their local environments (Lawton Smith 2005).
Table 2.4. Taxonomy of relationships between tertiary education and business

<table>
<thead>
<tr>
<th>Innovation</th>
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<tbody>
<tr>
<td>Knowledge production and transfer of knowledge</td>
<td>• Formal research collaboration</td>
<td></td>
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<tr>
<td></td>
<td>• Links to global technological and scientific networks</td>
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<tr>
<td></td>
<td>• Take up of patents &amp; licences</td>
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<td></td>
<td>• Published papers e.g. joint academic industry articles</td>
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<tr>
<td></td>
<td>• Contract research</td>
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<tr>
<td></td>
<td>• Specialisation in new technologies and leadership of new industries</td>
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</tr>
<tr>
<td>Technological applications of research, expertise and in-house facilities</td>
<td>• Testing services e.g. carbon dating, equipment testing</td>
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<tr>
<td></td>
<td>• Prospects of application (e.g. X-rays, lasers)</td>
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<tr>
<td></td>
<td>• Engineering design tools and techniques including modelling, simulation and theoretical prediction</td>
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<td></td>
<td>• Product and process development</td>
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<td></td>
<td>• Instrumentation</td>
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<tr>
<td>SME support</td>
<td>• Prototype development</td>
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<td></td>
<td>• Consultancy services</td>
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<td></td>
<td>• Testing</td>
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<tr>
<td></td>
<td>• Contract research</td>
<td></td>
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<tr>
<td>Entrepreneurial culture, Entrepreneurship and cluster development</td>
<td></td>
<td></td>
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<tr>
<td>Entrepreneurship</td>
<td>• Spin-offs</td>
<td></td>
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<td></td>
<td>• Science parks</td>
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<td></td>
<td>• Incubators</td>
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<tr>
<td></td>
<td>• Cluster focused technical assistance</td>
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<tr>
<td></td>
<td>• Network facilitators, developing academic and non-academic networks</td>
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<td></td>
<td>• Mentoring services</td>
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<td></td>
<td>• Place marketing and development, promoting brand image, organisation of showcase events</td>
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<tr>
<td>Networks</td>
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<tr>
<td>Human capital</td>
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<tr>
<td>Recruitment</td>
<td>• Recruitment of undergraduate and post-grad students</td>
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<tr>
<td>Training</td>
<td>• Vocational courses – technical and teaching e.g. technicians training</td>
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<tr>
<td>Vocational</td>
<td>• Placement schemes</td>
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<tr>
<td>Public access to knowledge</td>
<td>• Continuing professional development and extension programmes</td>
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<tr>
<td></td>
<td>• Public lectures and public access to libraries, museums, galleries, sporting facilities</td>
<td></td>
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<tr>
<td>Direct multiplier effects</td>
<td>• Staff, student and visitor spending</td>
<td></td>
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<tr>
<td></td>
<td>• Purchase of goods and services</td>
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<tr>
<td></td>
<td>• Contribution to tourism</td>
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<tr>
<td></td>
<td>• Support for inward investment</td>
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<tr>
<td>Governance</td>
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<tr>
<td>Engagement in decision-making processes</td>
<td>• Economic</td>
<td></td>
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<td></td>
<td>• Cultural</td>
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<td></td>
<td>• Sustainability</td>
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<tr>
<td></td>
<td>• Transport</td>
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<tr>
<td>Contribution to sustainable development</td>
<td>• Contribution to the quality of the built environment</td>
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<td></td>
<td>• Contribution to property-led urban regeneration</td>
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<td></td>
<td>• Provision of student accommodation</td>
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<td></td>
<td>• Effects on parking and traffic problems</td>
<td></td>
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<td></td>
<td>• Other land use issues</td>
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With respect to links with enterprises, although the degree varies greatly by region and by country, interactions with business have generally increased. A recent OECD report described the different rationales and mechanisms according to the types of firms involved and often on the technological fields represented. Three main types of relationship are distinguished:
• Relations between multinational enterprises and world-class universities. Multinational enterprises are externalising part of their research and development activities and are looking for the best laboratories, scientists and students. Their concern is not whether specific universities meet their needs, but that they are world-class.

• Relations between universities and small high-technology firms (spin-offs and knowledge intensive business services). This phenomenon, which is although important in terms of quality and small in terms of size, needs to be assessed in a more long-term perspective.

• Relations developing in a regional context between firms (often SMEs) and the local university. Here firms are looking for short-term, problem-solving capabilities.

These new roles for universities are particularly visible in the US where many public research universities have long-established missions to encourage business development. With respect to the key elements in university-business links, a recent study of the most successful US universities (see Box 2.12) highlighted the importance of university leadership (in championing economic development and innovation missions), faculty culture and rewards, active and well-organised technology transfer and entrepreneurship incentives throughout the university, and strong partnerships with private and other public organizations (Tornatzky et al., 2002).

Box 2.12. Research-industry relationships: the example of Georgia Tech

The top-ranked “Innovation-U” in a recent study by the Southern Growth Policies Board was Georgia Institute of Technology (Georgia Tech) in Atlanta. A prominent research university, Georgia Tech also works closely with Georgia state government, local communities, and businesses in a variety of technology-focused initiatives. Economic development and technology transfer activities are housed in Georgia Tech’s Economic Development Institute, which operates a network of regional technology transfer offices in 18 communities in the state, and in its parent organisation, the Office of Economic Development and Technology Ventures, which sponsors advanced technology incubators and faculty commercialisation programmes. Many other academic units, research centres, and the university’s continuing education programme support regional innovation missions. Long-term results from Georgia Tech’s regional innovation efforts include a massive expansion of industry-research partnerships, the development of cutting-edge, technology-based economic development programmes, scores of new high technology start-ups, ongoing technology and business support for thousands of existing firms, specialised industry training of thousands of people each year, and the fostering of systems for entrepreneurial development in the state.

Other “Innovation-U’s” highly ranked in the study were Carnegie-Mellon, North Carolina State, Ohio State, Pennsylvania State, Purdue, Stanford, Texas A&M, UC San Diego, Utah, Wisconsin, and Virginia Tech. The practices and partnerships of these innovative universities emerge from the “grass roots” – and not from the federal government or through a top-down standardised formula. “There are common practices,” the study authors conclude, “but no one model or approach is followed by all.” (Tornatzky et al., 2002)

Source: OECD (2005) Territorial Review of Japan

Universities are traditionally managed and supervised by ministries of education and ministries of research (when these competencies are separated) at national or, in federal and decentralised countries, at regional level. Their strategic missions are influenced by the programmes, instructions (in the case of public universities) and regulations designed by the ministries. Moreover, regulatory frameworks can also reduce the freedom and incentives for institutions and individual researchers to engage in projects with the private
sector (Box 2.14). OECD countries have introduced reforms in the governance of universities with the aim of increasing their flexibility and autonomy and, thereby, promoting better interaction among universities, public research organisations and firms. Japan is a good example (Box 2.13).

Box 2.13. Deregulation of universities: the case of Japan

In 2004, Japan’s national universities – positioned as part of the central government for more than a century – were reformed as independent public corporations. University faculty members are now non-governmental employees, not civil servants as before. From 2004 onwards, it will also be possible for other public universities to be incorporated according to the judgment of the prefectural government concerned. Selective university mergers to create economies of scale and other changes in academic incentive and evaluation systems are also under way. Universities are also rapidly establishing Technology Licensing Offices, incubators, collaborative industry-research centres, and other programmes to promote research commercialisation and regional development. The aim is to stimulate a more flexible, competitive and entrepreneurial university system in Japan that can not only undertake world-class research but also have significant impacts on regional innovation and development. Whether the latter goal is achieved will depend not only on the extent to which universities themselves embrace these reforms, but also on the ways in which regions and localities can build new linkages between universities, economic sectors, and territorial innovation strategies.

Source: OECD (2005) Territorial Review of Japan
Box 2.14. Targeted development programmes in response to regional needs

Karlstad University Professional Services AB was established in January 2005 to handle the business side of all commissioned training and education given by the university to companies and public organisations. The company has five staff and organises courses using Karlstad University staff and external experts from Sweden and beyond. The arrangement complements the traditional course delivery within the university and contributes to the general development of more applied and regionally-relevant curricula. It allows university lecturers to make external contacts, giving them experience of other kinds of teaching, and providing them with interesting and well-worked case studies for inclusion in their regular teaching activities. Clients include County Council of Värmland and other public organisations, such as the municipalities of in the region; Paper Province and other non-profit trade associations; companies such as AstraZeneca, Ericsson, MetsoPaper, SkiStar. It also has international clients e.g. Jiangxi University and several Norwegian counties. Courses given have the overall goal of strengthening research and teaching. Major areas include culture and learning, management, business and administration; health care, industry, IT and technology. Course examples include Pulp technology; Production management; MBA; Tissue technology, Business administration; Computer vulnerability analysis.

Family Firm System was launched by Dongseo University in Busan in 2004 after a 4-year development phase. Under the system, a senior academic mentor is designated to five companies which offer students and graduates internship and job opportunities. The Family Firm system has attracted 356 companies which have benefited from such close co-operation through reduced recruitment and induction costs. The system has enabled the university to: a) develop courses reflecting company needs; b) effectively utilise internship programmes; c) share equipment; d) conduct joint projects with business; e) increase job opportunities for graduates; f) improve the university’s reputation; and g) improve the university’s contribution to the regional community. The existence of the Family Firm System was an important factor in enabling Dongseo University to win five projects from the national New University for Regional Innovation scheme (NURI) competition in 2005.


How can regions stay innovative and confront innovation offshoring?

Policy makers in OECD countries clearly need to understand the global dimension of innovation activity and how it is evolving. To capture this global dimension, OECD is working with the Knowledge Competitiveness Report to track the evolution of innovation-related data in both OECD and non-OECD regions over the past five years. The results show that strong growth of non-OECD regions with respect to innovation-related investment. Some noticeable patterns include:

- There has been a clear rebalancing of resources with a West-to-East shift. Relatively strong geographical patterns are observed in the variations, indicating the reallocation of innovation-based resources towards specific regions, especially China.

- Chinese regions, and several others, have in recent years established a “virtuous circle” of innovation-related development. In these “virtuous circle” regions, growing business-led investment in innovation is fuelling economic growth, which is being fed back into higher earnings and greater investment in education.

- Within leading regions in OECD countries, many regions which previously specialised in knowledge-based manufacturing have begun to shift towards more to service-related knowledge-based activities. This decline in manufacturing employment in technological sectors is not directly linked to a poor performance on innovation indicators, but it is likely that there will be some impact over the longer term on business R&D investment.
Conversely, some OECD regions such as Brussels, better known as advanced service centres, appear to be finding niches in high technology manufacturing sectors such as biotechnology.

Despite offshoring, many of the less advanced regions in the sample, such as the southern regions of the US, are continuing to experience growth in their knowledge economies thanks to manufacturing-based employment in technology-intensive industries.

Looking forward, the concern of policy makers is to ensure that regional economies are innovative and thereby more resilient in the face of economic shocks and increased international competition. For example, the ability of Ottawa and Stockholm to recover both output and employment lost during the ICT crisis is a sign of their adaptability, although in each case, the restructuring has fundamentally altered the nature of the activities carried out in the region. The performance of the major car manufacturing regions in Europe and North America – which are still strongly oriented towards production – will offer more evidence of whether traditional sectors can be restructured as industrial locations, in spite of the concerns about the pressure of global competition.

The response of the regions to these evolutions takes a variety of forms, some more explicit than others. In most cases, there is some form of regional economic strategy that includes within it a business development and innovation plan elaborated at either the regional or municipal level, often co-ordinated with a national level strategy that includes specific programmes, instruments and funding. OECD research in a cross-section of industrial regions suggests at least six main policy objectives that regions are aiming to achieve (Table 2.5). These are closely inter-related and are often covered by the same programme, but they highlight the different dimensions of regional competitive advantage that policy makers are trying to enhance and illustrate the main region-specific assets on which regional policy makers are building their strategies.

### Table 2.5. Summary of policy objectives

<table>
<thead>
<tr>
<th>Regional asset</th>
<th>Objectives</th>
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</thead>
<tbody>
<tr>
<td>Supporting firms</td>
<td></td>
</tr>
<tr>
<td>Existing specialised firms</td>
<td>Broadening the customer base of specialised firms; reducing their dependence on multinationals, helping them to reach global markets.</td>
</tr>
<tr>
<td>Innovative small firms</td>
<td>Supporting small firms with technical facilities, linking them to venture capital and other finance, helping to create networks among small firms.</td>
</tr>
<tr>
<td>MNEs</td>
<td>Embed certain functions/activities of multinationals in the region through stronger supply chains and a richer regional environment, support interaction between large firms and innovative small firms.</td>
</tr>
<tr>
<td>Improving the regional environment</td>
<td></td>
</tr>
<tr>
<td>Cross-over technology</td>
<td>Reducing dependence on single industry by identifying cross-over or enabling technologies; finding new applications for sector-specific technologies.</td>
</tr>
<tr>
<td>Regional innovation system</td>
<td>Promoting linkages between economic actors through co-location (science parks, etc.), strengthening the applied research dimension of public R&amp;D facilities, supporting open innovation mechanisms.</td>
</tr>
<tr>
<td>Other measures of regional attractiveness</td>
<td>Infrastructure, ensuring that skills supply is appropriate, limit brain-drain and try to attract skilled people.</td>
</tr>
</tbody>
</table>

*Source: OECD Territorial Reviews.*
The tools available at the regional level vary considerably according to institutional frameworks and the focus varies according to the industry(ies) targeted. However, a number of policy relevant findings emerge:

First, a clear and systematic analysis of the region’s economy and assets in the context of global trends is the basis for any potential regional action. Quantitative and qualitative data is useful for the development of a clear analysis to appreciate what strengths are durable and where there may be new opportunities. This analysis also requires a clear understanding of the changing roles of different categories of firms (start-ups, SMEs, multinationals, etc.) and their role in global supply chains. However, the data are often at too large a scale and do not capture the very localised dimension of the knowledge spillovers that policy should be targeting (evidence from the US points to a rapid decline in the positive spillover effect with distance).

Second, a common understanding of the problem facilitates the process for developing consensus about a strategy. Given the numbers of stakeholders, both public and private, this consensus is needed for a co-ordinated response. Often a compelling problem or crisis serves as the trigger for co-ordinated action, and there is a strong risk of complacency when regions fail to anticipate future trends because current indicators are positive.

Third, perhaps the most important role for regional strategies is to favour adaptation to change. While public actors are not well-placed to predict the future of global product markets, they can play a clear role in developing an environment that supports private actors in their efforts to adapt and seize opportunities. Tools are needed both to understand and monitor how their research and educational assets interact with enterprises with the goal of designing policies to help build more systematic linkages across all actors.

Spatial planning as a tool for integrating regional policies

Regional policy strategies can make better use of spatial planning in order to enhance synergies and avoid duplication and conflicts within and between regions. OECD work on spatial planning suggested three main conclusions that are consistent with the discussion above, namely:

- The achievement of national and regional economic, social and environmental goals can be supported by improving synergies between sectoral policy measures.
- Spatial planning is one important means by which to promote these synergies and improve the allocation of investment and resources.
- However, the effectiveness of current spatial planning approaches needs to be improved.

Spatial planning can be seen as one means by which to manage demand for future public investment, emphasising trajectories that maximise growth opportunities without overstretching public investment requirements. As countries, regions and cities strive to improve their competitiveness with respect to other places, so the (local) inputs that contribute to economic success, including the quality and functioning of infrastructure and public services, are being closely scrutinised. In this context, spatial planning, as both
a means to reduce factor costs and to reduce public investment needs, should have an
important role to play.

Spatial planning is practised at various levels of government, and the level has a
major influence on the objectives and scope of the planning process. The highest level of
plan is usually the macro-level plan – usually at national level but also in some countries
at large region level (e.g. for US states). Many countries, for example the UK and US, no
longer have a national spatial development plan as such. Others are exclusively
conceptual (e.g. France) or have become increasingly conceptual (e.g. Japan), concerned
with economic development issues in the aggregate but not with allocative or land use
decisions directly.

The nesting of plans at different levels has become less and less straightforward. In
the past, macro plans were specific and directive, which made it somewhat easier to
disaggregate them into regional and local plans. Recently, these national development
plans have become broader and more conceptual, combining physical development
objectives with less tangible goals such as sustainable development. A principal challenge
facing spatial planning today is, therefore, how to reconcile the diversity of roles that
spatial planning is expected to play at different spatial scales. In particular, the middle
level plans - examples include the Schéma directeur in France, the structurplan in the
Netherlands and regional spatial strategies in the UK - have become more important as
expressions of a regional development strategy.

Despite some variations, the planning systems of OECD countries can, in general, be
said to encompass the following fundamental functions:

- Spatial planning provides a long or medium-term spatial strategy in pursuit of
  agreed objectives, often controlling regional disparities and working towards
  sustainable development.

- Spatial planning is also frequently a tool to co-ordinate various sectoral policies in
  pursuit of these spatial development objectives.

- Spatial planning is increasingly understood as a mechanism of co-ordination and
  interaction which enables sub-national governments to shape their own spatial
development policies in conformity with national or even international policy
  goals, and facilitates the regional and local adaptations of national policies.

The last point - spatial planning as a means of policy integration - seems particularly
relevant. For example, Portugal’s recent explicit attempt to design a regional policy at a
national level has been the recent reform of spatial planning. Portugal followed various
OECD countries (such as France and Japan) in considering spatial planning as the closest
policy to regional policy, due to the focus on the territorial distribution of resources and
the specificities of different types of regions. After decades of limited use of spatial
planning, Portugal has just adopted a wide-ranging instrument called the National Spatial
Policy Programme (NSPP), which aims at assessing national territory, forecasting
possible development trends, and proposing lines of action (Box 2.15).
Box 2.15. Portugal's National Spatial Policy Programme (NSPP)

The National Spatial Policy Programme (NSPP - Programa Nacional da Política de Ordenamento do Território or PNPOT in Portuguese) was designed as a tool to “know national territory; forecast its future; and act for spatial planning and territorial development”. After a task force was set up in February 2003, the technical proposal was put together in 2005 followed by a public participation process in 2006. The parliament voted the law approving the NSPP in July 2007 (published as Law nº 58/2007 on September 4th, 2007).

The NSPP is composed of two parts:

(1) A report identified 24 “territorial and spatial planning challenges” (in terms of natural resources and risk management; urban and rural development; transportation, energy and climate change; territorial competitiveness; infrastructure and collective services; civic culture and spatial planning) and put forward a vision for Portugal 2025 (“a well-planned and sustainable territory; a competitive, integrated and open economy; an equitable territory; a creative society with a sense of citizenship”).

(2) An action programme proposes 6 “strategic objectives” (preserve and value biodiversity, landscapes and cultural heritage; reinforce territorial competitiveness and international integration; promote the polycentric development of territories; ensure territorial equity in the provision of infrastructure and collective services; expand networks and ICT infrastructure; reinforce spatial planning quality and efficiency), in turn developed into 36 specific objectives and 197 measures.

At the same time, Regional Spatial Plans (Plano Regional de Ordenamento do Território or PROTs in Portuguese) are being prepared in order to cover all NUTS 2 regions. They are elaborated by the Commissions for Regional Co-ordination and Development (CCDRs), i.e. the deconcentrated bodies of the central government (Ministry for Environment, Spatial Planning and Regional Development) in the five mainland NUTS 2 regions, and by the regional governments in the two autonomous regions of Azores and Madeira. The CCDRs organise plenary and sectoral sessions to discuss the PROTs, and municipalities are invited to participate via commissions. The PROTs have a binding power over municipal development plans (PDMs) elaborated by municipalities.

Note: Further information about the Portuguese NSPP is available on www.territorioportugal.pt

A basic problem of spatial planning is its relative weakness within the overall hierarchy of government departments. Many sectoral policies are strongly interdependent – transport and housing, for example. They are also influenced by and exert an influence on land use. Transport demand is closely related to the "trip generation" dimension of land use; in other words, the density of housing creates spatial demand for transport. As such, choices about zoning and other mechanisms that affect the density and spread of residential areas will determine, to a large extent, public transport or road network investment decisions. In some cases, the objectives of different sectoral policies can be contradictory – for example, there is often tension between housing and industrial policy and environmental policy where greenfield sites are concerned. Planning is usually seen as a main instrument by which sectoral policies are co-ordinated and given a spatial articulation.

However, spatial plans appear in some cases to have been reduced to a suggestive role rather than an expression of agreed commitments. Within this, the mismatch between the long and medium-term strategic planning function that is a key element of public investment and the more short-term mechanisms of policy programming and funding (managed directly by line ministries) has become an important obstacle to alignment across different sectors.
Spatial plans span not only local government boundaries but often two or more administrative regions as well. This poses major problems of co-ordination in general and makes planning and the implementation of plans complex. Manifestations of poor co-ordination include:

- Poor quality of public services where administrative boundaries inhibit efficient use of resources and investment.
- Duplication and waste where sectoral policies, often managed by different levels of government, are poorly integrated and have different, even contradictory objectives.
- Reluctance to share resources and information among public authorities.
- Dispersal of funds to a multiplicity of agencies that have similar mandates.

Many problems of co-ordination are related directly to weaknesses in the system of governance, which often does not adequately reward co-operative behaviour. There is a tendency to view public investment in infrastructure and service provision at regional or local level as being spatially neutral, *i.e.*, as following an optimal economic allocation model; whereas in fact the process is strongly influenced by spatial factors, in particular local political dynamics. The choice of what type of infrastructure is funded or where a particular facility is located will have both an economic and political bottom line, and the ability of a governance system to arbitrate competing demands, across, as well as within, administrative borders, goes a long way to explaining the effectiveness of policy implementation.

**Rural development policy’s new paradigm**

While rural areas are also found in large urban agglomerations, the typical focus of rural development policy has mainly been on rural remote regions, where the majority of the population is found in the open countryside or in small cities and towns, and secondarily on intermediate regions, where much of the population is in an urban setting but there is still a significant share of population in small settlements and the open countryside. In framing policy, rural areas are too often still seen as characterised by a dependence on agriculture, a low level of economic performance, and as a source of underutilized labour for urban centres. Although there is a historic truth in this stereotype, it is no longer an accurate depiction of the majority of rural regions in the OECD countries.

In virtually all OECD countries agriculture now plays both a minor role in national GDP and is a source of employment. Moreover, agriculture shares the same characteristics in the majority of rural regions in OECD countries. Most of the people who live in both rural remote and intermediate regions do not earn their incomes either directly, or indirectly, from agricultural production. Agriculture continues to play a key role in income and employment in a small number of regions, and in most of the OECD, agriculture still dominates land use; but most rural residents are now engaged in economic roles that differ little from those found in urban areas. Where agriculture is instructive is that for decades it has continuously demonstrated a high rate of innovation and, in the process, has vastly increased output on a slowly declining land base by substituting capital for labour.
OECD territorial analysis has shown since its inception in the early 1990s that rural regions cover a wide range in terms of economic performance. Some rural regions in member countries are among the worst performing, but some have higher rates of economic growth than their urban counterparts. This demonstrates that economic growth is not just an urban phenomenon. It also suggests that there may be a role for government in identifying why some rural regions grow while others do not and then in providing appropriate support to lagging regions in order to improve their performance.

Finally, while some outmigration continues to take place from rural to urban areas the magnitude is considerably smaller than it was in the past. Internal migration is no longer a significant source of urban growth in most OECD countries because the demographic conditions in most rural regions can no longer support outmigration. Moreover in many rural areas, particularly those with a high level of amenities or strong growth there is net migration.

The changing situation in rural areas dictates a need for a new rural policy. In 2006 the OECD member countries adopted the principles of the New Rural Paradigm (NRP) as a way to formalise current best practices in rural development into a set of principles for national policy development (see Box 2.16). The guiding ideas that underpin the NRP include:

- Recognition that sectoral policies have only limited capacity to achieve rural development objectives.
- A change in policy which has reduced aid for disadvantaged regions, including rural regions and moved the focus from equity to making investments that enhance local competitiveness.
- Greater emphasis on sustainable development and resource management as a policy objective.
- An understanding that rural regions occupy the majority of the national territory of most nations and that land specific issues remain a crucial element of rural policy, although now in the form of public goods rather than the traditional source of raw material inputs to production, even as natural resources play a smaller role in national GDP.

Evidence from national rural development programmes, suggests an ongoing evolution of rural policies towards some or all of the following elements and policy objectives:

- Efforts to reinforce rural economies, principally through diversification of economic activities: this often involves identifying a competitive advantage of the regions that may be based upon its location, its specific resource endowment, or its potential to manufacture a product for export to either an urban area or internationally.
- Upgrading of transport and communications infrastructure, promoting networks of knowledge and expertise, supporting education and training, and increasing the attractiveness of areas for new enterprises; including enhancing business assistance and business services, establishing inter-regional and international business networks and encouraging endogenous innovative initiatives.
- Recognition that the adoption of better technologies, as has been the case in agriculture, mining and forestry, is a crucial way to maintain the competitive
position of rural areas as they face new competition from developing countries that have a huge cost of labour advantage.

- Efforts to improve the functioning of local labour markets by: providing training in forms that are appropriate for smaller numbers of participants, increasing knowledge of job openings, providing job matching services and broadening the skill set of the local pool of labour.

- Encouraging greater collaboration among individual units of local government within a region to overcome the rural disadvantages of distance, density and critical mass.

- Attempts to restructure agriculture through intensification, modernisation and increasing value added in productive regions, extensification and development of multifunctional agriculture in less productive regions, and internal diversification and quality products in areas of “traditional” agriculture.

- New ways of providing public services in rural areas, sometimes combined in service centres and, as in the case of telemedicine and distance learning, sometimes using information and communications technologies.

Box 2.16. The New Rural Paradigm: summary of the main findings from OECD work

After more than a decade of analysis of rural conditions in member countries and considerable discussion of rural policy strategies the OECD released a New Rural Paradigm (NRP) document in 2004. The strategy provides a broad conceptual approach for the design of rural policy in member countries. It suggests that even in the modern global economy rural regions can play a vital role in national development, but only if policies are revamped to foster growth. In particular, the NRP argues for a shift from a policy framework that was largely developed in the post World War II era to one that reflects conditions in the twenty-first century. Typical rural policies in OECD countries focused on national strategies for modernising agriculture and subsidising the provision of public services to rural areas. This “top-down” entitlement approach provided little incentive for proactive behaviour by rural people and their local governments and not surprisingly the results were often disappointing. By contrast, the NRP advocates a greater degree of local responsibility for designing region-specific development strategies and an “investment approach” by national governments that provides support to these locally-based strategies. The approach builds on the success of nationally funded locally-based organisations, such as, LEADER in the European Union and Community Futures in Canada, that have demonstrated the power of “bottom-up” development policy.


Bringing these different elements together into a multi-sectoral policy capable of promoting rural diversification and competitiveness, while increasing the quality of life of rural inhabitants, represents, to varying degrees, a challenge for all OECD countries. But the recent series of Rural Policy Reviews suggests it is a challenge to which member countries are positively responding. Rural Policy Reviews have been conducted for Finland, Germany, Italy, Mexico, The Netherlands, Scotland and Spain. Reviews are underway in the province of Quebec in Canada and England. In addition, a review has been completed for China and one is planned to start in South Africa.

The reviews show that while there has been considerable progress in moving rural policy away from an exclusive focus on agriculture in many countries, rural policy often
remains largely linked to agriculture. This reflects a combination of factors: persistent, strong, national, financial support for agriculture as a sector, the tendency for ministries of agriculture to also have lead responsibility for rural policy, limited interest by other ministries in rural issues, and in Europe the dominant role of the CAP in EU programmes.

We also see that member countries where reviews have been undertaken are steadily reducing the dominant role of national governments in defining local development strategies. National governments continue to play lead roles in providing funding and in establishing broad parameters for acceptable activity but there is a strengthening recognition that each rural region has to define and act upon a unique approach that reflects its particular competencies and opportunities. One way that rural areas are encouraged to "act locally" is through national support for multi-community development organisations, such as LEADER in the European Union countries, Community Futures in Canada, Regionen Aktiv in Germany and PRODER in Spain. These organisations all provide a vehicle for creating local development strategies and funding for implementing them. Evaluation studies of the various organisations uniformly find these approaches are effective in improving rural areas.

Finally, an emerging issue in virtually all OECD countries has been identified through the reviews. This is a new focus on the interaction between rural and urban policy at the urban rural fringe. Much of the discussion is framed by urban efforts to restrict the pace of suburban development to preserve access to green space and to avoid the costs of providing new public services. Clearly, developed land has greater value than farmland in almost all circumstances and conversion generally increases aggregate social welfare. The main issues from a rural perspective involve the incidence of benefits and costs from either allowing or prohibiting farmland conversion. This is particularly important because rural interests typically play only a minor role in these decisions. Prohibitions on conversion reduce rural property values and allow the urban population to obtain access to green space at low cost. If conversion is allowed there is a loss of the green space public good, but how the windfall gains from conversion are shared becomes an important policy issue.

Countries in markedly different situations including, the Netherlands and England where the majority of rural land is found in predominantly urban areas, and Australia and Canada, which are both highly urbanised societies despite their large land base, share this concern over effective management of rural land conversion. Policies in the different countries reflect differences in land tenure rules, the relative responsibility of national and local government for land use planning and management, and different cultural values regarding public access to private property.

In essence, very different development trajectories are appearing in rural regions. The main drivers of this process are the same as those that are driving economic transformation in the OECD in general, namely globalisation, technological change, demographic shifts and the reorganisation of production and work. For example, in rural regions, where accessibility has always been a key impediment to growth, the decreases in transport and communications costs are having a major impact (Bollman and Prud’homme, forthcoming; Glaeser and Kohlase, 2004). The time-savings from faster transport and better communications are important for both enterprises and individuals. Rural regions with the right mix of endowments can now be both attractive as residential locations and competitive locations for enterprises in both established and new industrial and service sectors.
The examples of France and Canada are particularly illustrative in this regard (see Box 2.17).

**Box 2.17. Diversity in rural performance: France and Canada**

France: Long-standing fatalism about the future of France’s rural regions has, to some extent, been replaced by cautious optimism. For the first time in a century, more than half of France’s rural municipalities experienced a net growth in population over the period 1990-1999 and this trend appears to have been consolidated since then. Despite a worsening natural balance (-163 000 more deaths than births), this deficit was more than offset by strong inward migration (+410 000 new residents). Even the regions classified by INSEE as “isolated” had, for the first time a net demographic increase. Moreover, despite a continuing decline in agricultural employment, rural regions experienced net employment growth over the same period, with strong growth in service employment and stable industrial employment. It is evident that regions where traditional agriculture or traditional manufacturing industries predominate and where the population density has declined significantly face the most pressing problems. At the same time, other types of region, including those with strong manufacturing sectors (agro-food, but also other sectors), tourism industries or significant new populations, are faring well.

In Canada, manufacturing is moving to the rural regions that are close to metropolitan areas (Baldwin et al., 2001). Even though the value of agricultural exports continues to decline, manufacturing remains an exportable sector for predominantly rural regions (Freshwater, 2003). It is interesting to note that in the 1990s, across all OECD predominantly rural regions, employment in manufacturing grew by 0.5% per year whereas manufacturing employment declined in the 1990s in intermediate regions and in predominantly urban regions.

This heterogeneity has led to a different approach to rural policy. Broadly speaking, the positive signs coming from some rural regions suggest that policy should be less "defensive" (i.e. focused on limiting decline) in the future and concentrate more on seizing new opportunities. Moreover, they also suggest that policy needs to differentiate among rural regions with respect to their problems and potential, rather than assuming decline and limited potential in most, if not all, rural areas. An influential report on rural policy in France by the DATAR (now DIACT), for example, emphasised that rural policy should be capable of responding to these two needs – continuing support for the most vulnerable regions and new approaches to leveraging the endogenous/emerging potential of the other regions. This finding is uniformly supported by the various rural reviews.

The issue is then how to review and reform policies so that they are more focused on seizing new opportunities in rural regions.

As a first principle, the necessity of territorially sensitive policy is clear. Some forms of public policy are appropriate for large cities in promoting diverse knowledge based activities and addressing congestion costs. Conversely, other policies are appropriate for rural areas to facilitate the adoption of new technologies and reduce the burden of low density. These differentiated policies can help smaller places, as well as rural areas, to better exploit their own development potential. Distinctive advantages related to higher quality of life and the existence of various natural and cultural amenities have fostered a movement from large cities to rural areas in some countries, e.g. in France and the UK, or from rural to rural areas e.g. in China. In a number of OECD countries more people indicate they would prefer to live in the countryside than in an urban setting. In response, some smaller places have been able to seize niche markets and to offer a more attractive
living environment than congested urban agglomerations. Diversification of the rural economy is positively correlated with population growth, higher income and employment growth across OECD countries, which suggests an important avenue to raise the utilisation of resources in rural regions and foster regional development.

Fostering economic growth is a clear priority for rural areas. Without locally generated income and employment, rural people and communities can only survive if they receive transfer payments. A key part of the New Rural Paradigm is a reduction in subsidies, but consequently there must be an increase in self-sufficiency. An important part of this policy will be ensuring that rural firms have appropriate access to financial capital, access to the innovations that are generated in urban areas and access to labour force development programmes that can increase the skill level of workers.

Another priority policy area is sustainability. Rural areas play a major role in environmental sustainability since the people in rural areas manage the majority of the natural environment in each country. In many cases, individual farmers, forest owners and owners of other forms of rural property are asked to provide stewardship functions that are pure public goods. In most cases, they are not fully compensated for these functions and they are often constrained in their private decisions by society’s desire for specific levels of these public goods. Finding better ways to reconcile the economic aspirations of rural residents and broader social desires for environmental preservation is a crucial task for rural policy.

A further issue in sustainability is the role of policies to address climate change. Most of the policies proposed to reduce emissions or reduce energy consumption have a disproportionate impact on rural residents. For example, high fuel taxes adopted in some member countries to reduce the use of cars and encourage the use of public transit place a much larger burden on rural residents who already faced longer commutes to work and who typically have few or no public transit options. Similarly, efforts to reduce emissions have large implications for quintessentially rural industries such as agriculture, ore extraction and refining and energy production. While it can be argued that negative externalities associated with these industries should be limited, it is also the case that the costs of control will largely fall on rural people while the benefits will accrue to all of society.

Public service delivery in rural areas is a final key policy area. Most public policies are merit goods, so there is a social benefit if all citizens have access to them. But in rural areas service delivery for even basic public services such as education, health care, electricity and transport is complicated by low density, low volume and distance. This makes the unit cost of service delivery higher in rural areas than in urban areas. In some countries there is a national right to equal access for all services and in these countries there is great pressure to find ways to reduce the cost of providing rural services. In other countries where there is no right to receive services, there is a tendency to reduce the level of services available in rural areas.

Innovative ways to deliver rural public services have been found in most OECD countries and this has allowed rural people to receive basic services in more cost-effective ways and to take advantage of additional services that improve both the quality of life and directly contribute to the economic competitiveness of the regions (see Box 2.18). In particular, ICT services in rural areas both provide connectivity to the rest of the world and act as a delivery platform for other services, such as, health care, education and worker training.
Box 2.18. Public service delivery in rural areas: OECD research findings

Remoteness, low density, and adverse demographic trends - declining numbers, an ageing cohort structure and increasing relative poverty, low population - are the main challenges for public services being provided either by the public sector, volunteer groups, or by for-profit providers. Issues related to public service delivery in rural areas deal with:

- Making public services accessible and equitable in rural areas.
- Financing public services in rural areas.
- Making public services sustainable in rural areas.

Mechanisms for addressing challenges

OECD member countries have implemented several mechanisms to overcome the challenges for the provision of services in rural areas. Although observed examples are linked to particular services, some could be transferable for the provision of an array of services to rural areas. Nevertheless, in rural areas some services continue to be provided by traditional modes, as access remains dependent on physical proximity. OECD member countries have innovated to improve the delivery of public services in rural territories:

- By modifying local administrative or service delivery boundaries.
- By moving users to services or bringing services to users.
- By facilitating access to a wider range of services through ICT and shared professional responsibilities models.
- Through community-based delivery schemes.
- By adopting market-based service delivery in some rural areas.
- By improving coordination across levels of government for more efficient resource allocation.

A territorial strategy for rural service delivery

Public services contribute to social welfare and economic development in four main ways. They provide a platform for economic development, enhance human capital, bolster social cohesion and strengthen network economies. Rural service delivery requires finding an appropriate balance among the four functions of public services. The relative importance of these functions may vary among a country’s rural territories and this will help determine how the service delivery system functions. However, the emerging interest in fostering locally based economic development that is supported by sound investments in firms, people and institutions, as described in the OECD’s New Rural Paradigm (OECD, 2006a), emphasises the growing importance of addressing the role of public services as a platform for economic development.

Structuring public, territorially sensitive, service delivery strategy is needed. OECD countries face the challenge of finding efficient ways to deliver public services to their rural areas, while simultaneously refocusing these services to enhance economic competitiveness. A key part of this rebalancing of services involves not losing sight of the other functions of public services in the course of their re-organisation. Limited budgets challenge all governments and there may be a tension between addressing citizen entitlements and expectations while expanding the local economy.

Flexible governance schemes that can be adapted to different locations can allow for innovation in the provision of public services and for addressing concerns about the viability of certain rural areas. Differences in rural areas and in their populations’ needs and preferences call for differences in the conditions under which public services are made available and thus for a mix of public service arrangements adapted to regional needs and more innovative policies.

While individual policies serve specific functions it is also important for governments to recognise the importance of policy coherence. There is a growing recognition that the various levers of rural policy, and indeed some national policies need to be connected, or joined up, so they reinforce each other rather than conflict. In order to overcome accessibility limits while valorising place specific assets, individual rural policies typically need to cut across several policy streams, including transport and ICT, public service delivery, and SME development. Transport investment in rural areas often requires more sophisticated assessments than traditional cost-benefit analysis which tends to focus on the direct user benefit, and needs to avoid excessively thin and broad coverage which might increase maintenance needs and reduce overall returns on investment with only limited impact on development. The diffusion of ICT and particularly broadband access has generally yielded positive results as it is not confined to one sector (e.g. in France and Spain). Public service delivery in rural areas faces traditional challenges in terms of critical mass and accessibility but represents a key factor to help embed new migration and seize development opportunities. Innovative solutions successfully experimented in OECD countries have ranged from multi-purpose one-stop shops (e.g. Citizen Service Offices in Finland) to increased use of ICT (e.g. telemedicine in Norway). SME development in rural tourism activities has also been encouraged through active collaboration between public and private sectors to promote amenity markets (e.g. the Bregenzerwald “cheese route” in Austria, rural museum networks in Sienna, Italy), specialised brokering, networking and business support services (e.g. the “Fusion” programme in Scotland), and credit guarantee or micro-credit mechanisms (e.g. Cajas de Ahorro in Spain). Upstream investment needs to focus on enhancing both supply and demand of education in rural areas (e.g. tele-education facilities in Norway, improved rural school bus routes in Australia, teacher-parent partnerships in Canada).

Given the lack of institutional mass frequently found in sparsely populated regions, effective investment for rural development requires particularly flexible mechanisms to join resources and integrate local social capital into the policy-making process. Municipalities can decide to pool resources together by signing inter-municipal agreements, sometimes through the creation of voluntary micro-regions in charge of joint public service delivery as well as economic development initiatives (e.g. Czech Republic, Hungary). See also Chapter 3. Municipalities also find valuable partners in local development associations, social enterprises and non-profit organisations. Central governments could easily make more use of well proven initiatives, such as LEADER and Community Futures, that support community-based initiatives based on local knowledge. This has been the case in some countries (e.g. “On the Ground” programme and Community Development Trusts in Scotland) but most countries still provide vary limited funding for this type of activity.

The rural development strategies being introduced by Member governments are, therefore, based on a multi-sectoral and global approach to the rural economy and take into account the interdependence of its components and the diversity of its structures. The recent trend to integrate sectoral action plans into more general territorial plans means that rural development is now viewed in most countries as being spatially oriented and a cross-sectoral policy area, which takes into account such issues as efficient and well-targeted agricultural policies, active labour market policies, the creation of new market opportunities, alternative uses of land (both within and outside agriculture), protection of the environment and improvement of the quality of life, the provision of services and infrastructures, and the need to address human capital issues.
Sustainable urban growth: a new policy agenda

Cities are home to more than half the people living in OECD countries and almost 50% of the output and jobs of many nations is found in their largest city. Successful cities attract talented, young, highly-skilled workers, are centres of innovation and entrepreneurship and are competitive locations for global and regional headquarters. The proximity of universities to research and production facilities means cities are where new products are developed and commercialised. More than 80% of patents are filed in cities. As mentioned in Chapter 1, the concentration of economic activities in urban areas occurs mainly because of benefits associated with economies of agglomeration generated by the proximity of firms and talents. But these benefits are not unlimited: large cities, with more than 6-7 million people, tend to outgrow the economies of scale. In fact, urban concentration can also generate negative externalities. Though most cities have higher economic growth, foreign investment and labour productivity than the rest of the country, they are also more polluted, crime-ridden and socially disparate. Some cities can also falter like Berlin, Lille, Naples, and Pittsburgh which perform below the national average for income, productivity, skills, and employment. In this context, national urban policies are often necessary to foster or preserve the benefits of agglomeration and to address the negative externalities of urbanisation.

Urban policy faces a number of specific challenges. These challenges relate very closely to those that animate discussion of regional policy’s new paradigm. However, they are also somewhat specific to the urban context as well. They relate, for example, directly to questions of equity vs. efficiency (particularly in a context where cities, even the most successful ones, host large pockets of poverty, unemployment and deprived neighbourhoods); they also relate to how competitiveness policies can promote competition among places without generating harmful or market distorting fiscal competition; they also relate to the need to determine clear roles for different government levels and co-ordinate among them. Given the scale of energy use and CO2 emissions in cities (between 60 to 80%), urban policy is also at the forefront of some of the new issues that are emerging in the regional policy domain, notably climate change and sustainable development. In this respect, urban policy in OECD countries has a new momentum and the responses of urban policy to key challenges, such as those listed below, are crucial for the evolution of regional policies more generally.

Before addressing the main emerging trends in urban policy, it is important to recall some key basics about the concept itself. The latter indeed transcends the confines of narrow definitions given that nearly all public policies directly or indirectly affect urban development. Central governments have a large impact on urban living conditions through a variety of policies, programmes and projects that are being implemented by a wide range of national ministerial departments and agencies. At the most basic level, national governments directly contribute to the operating budgets of metropolitan areas. National programmes affect cities in myriad ways: national housing programmes often determine density, patterns of urban growth, and the efficiency of energy use; national support of transportation infrastructure may change the built environment and accessibility of entire cities and neighbourhoods; and a nation’s investment in education and local R&D facilities can greatly improve the environment for innovation and entrepreneurship. While particular programmes channel funds directly to cities, a national government may also support regional programmes where it becomes difficult to disentangle rural and urban impacts. This is particularly challenging when urban policy also applies to very small towns in rural locations.
Besides, urban policy objectives differ across countries. They are contingent on the specific challenges facing cities; for example, the approach used for cities undergoing industrial restructuring will differ from that used for high-growth cities. Some countries, such as the United Kingdom, the United States and France, are facing more serious spatial segregation issues in their cities than in Nordic countries, and their policies need to target specific neighbourhoods. The importance of urban development also varies across countries. This is due to differences in the urbanisation rates in OECD countries, ranging from above 90% (Iceland, Luxembourg, the Netherlands, Australia, United Kingdom) to below 60% (Finland and Ireland).

Urban policy must take into account varying levels of political centralisation among federal and national governments. In federal countries, intermediate levels of government, whose responsibilities are comparable to the national government of unitary countries, tend to be in charge of urban development. However, recent examples point to a growing interest in urban issues on the part of federal government: in Canada, the Federal Government created a Secretariat for Cities under the aegis of the Prime Minister (later merged within Infrastructure Canada); in Switzerland, the Confederation inaugurated a policy for agglomerations (OECD 2002 and the Swiss Federal Council, 2001); and the central government of Spain passed legislation that confers a special regime on large metropolitan areas (Rodríguez Alvarez, 2004). In more decentralised countries, the national government has often restructured its administrative and technical machinery at the sub-national level. For example, some national administrations have re-organised authorities into metropolitan regions, supra-municipal authorities to which certain powers (mandatory and optional) have been transferred. In other circumstances, national-level reforms are less explicit and are limited to the subsidisation of existing regional councils and infrastructure projects.

Last but not least, many policies that are not seen as constituting urban policy have considerable differential effects on different locations, favouring development in some areas rather than others. Some of these are clearly spatial, such as the location of airports or major research institutes, but may not always be seen as affecting cities as such. Others are only implicitly spatial, though their implications for cities and their economies can be very strong: regulatory decisions that advance or hinder specific economic sectors, which are located in some areas rather than others; constitutional arrangements that bring political prominence to some areas rather than others, for example under schemes of devolution, or through the geographical basis of governing majorities. It is important for the success of urban policy that these “implicitly urban” policies are recognised as such.

Comparative analysis of national urban policies among countries is difficult to conduct for the reasons mentioned previously. Yet, OECD studies conducted to date at national and urban levels identify two key emerging trends:

The first trend is that regional and urban development policies increasingly endorse a more pragmatic approach to the concept of balanced territorial development which will benefit urban regions. For a while, many national governments have tended to perceive excessive urban concentration as negative. The main arguments were that the impact of such concentration of population and output in metro-regions on the overall development of a national economy was negative because it was draining skills, capital and physical resources from other regions, thus compromising balanced territorial development. Moreover, the fact that this high concentration was generating a number of negative externalities gave more legitimacy for taking action. Based on this argument, many OECD countries have implemented (and are still implementing) specific policies to
restrict the development of their largest metropolitan areas. These include for instance France, the Netherlands, the United Kingdom and Korea (Box 2.19.). Policies include both incentive or deterrent measures to contain the development of large cities such as specific regulations and taxes (new or higher taxes) to set up new offices (France, United Kingdom, Korea), direct subsidies for the relocation of firms to other areas (United Kingdom), restrictions on housing supply (the Netherlands), or relocation of public functions and universities (France, Korea).

**Box 2.19. Examples of OECD countries monitoring the growth of their largest metro-regions**

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; policies were therefore focused on dispersing growth out of the Randstad towards more peripheral regions in the North and the East of the Netherlands. In reality, however, population growth continued to be concentrated in the Randstad and led to urban sprawl. Despite explicit policies to concentrate population growth in designated areas and to keep the Green Heart unaffected by urban construction, the whole Randstad area has gradually become more urbanised, including the Green Heart (OECD, 2007c).

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 institutions in Seoul (OECD, 2005c). The nature of the policies has changed numerous times 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 2005c).


This debate over urban concentration has also been linked to that which has opposed urban (including the largest cities) versus rural regions. National governments in OECD countries have for a while opposed “rich urban regions” with “lagging rural regions” so that distribution of funds for regional development policies went mainly to what used to be classified as “rural”. OECD analysis on regional trends has demonstrated that this generalisation was unfounded, as rural areas were not synonymous with decline and there were a number of urban regions experiencing decline and which were systematically lagging for a number of indicators. Moreover, focussing only on lagging regions, and thus excluding de facto the champion urban areas, did not produce a positive outcome. It did not solve the issue of concentration nor help to meet the balanced territorial development
objectives as champion urban areas in many cases have continued to attract people and firms, but with increasing difficulties in facing the challenges of global competition and the associated social, economic and environmental costs. It is interesting to note that the acceleration of the urbanisation process in China, the country which counts the highest number of urban dwellers in the world today, has occurred despite a successive implementation of anti-urban policy measures from the central government. The Chinese government’s approach to urban policy has changed over the years. Economic development of rural areas is a priority, but the central government understands that the prosperity of different types of regions is closely interlinked, and therefore the government is paying greater attention to the development of cities, including that of the major urban clusters (Pearl River Delta, Yangtze River Delta and Pan Bohai Metro region) that were, for the first time, explicitly mentioned in the last Five Year Development Plan (GOV/TDPC/URB/RD(2008))3 and forthcoming review of Guangdong).9

Several factors are forcing national governments to rethink their policy approaches to urban areas. First, as mentioned previously, countries have now endorsed the idea that economic performance depends on their capacity to maintain the competitiveness of their urban regions. The role of large cities on the international marketplace has clearly impacted the way national governments perceive high urban concentration. While in many cases stemming from market forces, the process of establishing or reinforcing urban areas as a preferred location for advanced economic activities has quickly become a major field for public policy. Moreover, the negative externalities mentioned previously tend to exacerbate over time so that national governments are increasingly concerned with taking a more active role in such issues as infrastructure maintenance and development or social cohesion, distressed areas, crime and so on.

In this context, countries that have so far oriented their regional development policies towards the objective of balanced territorial development are now adopting a more pragmatic approach which takes into account the role of their champion cities. In France, for instance, concerns have been expressed about the competitive position of the Paris metro-region on a global scale. The OECD (2006) Territorial Review of France highlighted the fact that the region recently fell behind its major EU competitors for its innovation capacity and competitiveness, partly explained by the decision to relocate some public research centres outside the region. Since the 1960s, France has indeed implemented a succession of redeployment policies towards other urban poles of growth to meet its objective of more balanced territorial development. These policies have led to the emergence of eight major provincial – although not global – metropolitan areas (Toulouse, Lille, Nancy, Strasbourg, Lyon, Nantes, Bordeaux and Marseille), to the detriment of Paris as the unique global city of the country, the unique international competitor. Recently, however, the Ministry for the capital region was given the mandate to come up with a strategy to enhance the city’s international competitiveness. In a similar vein, the Randstad-Holland region has also been endowed with a National ministry, while the national government focuses mainly on sustaining other regions.

In Nordic countries, such as Finland or Sweden, which are dominated by one single metropolitan area and a large number of smaller urban regions (also called city-regions), national governments are now just beginning to develop differentiated urban policy approaches to preserve the growth capacity of their champion cities while enhancing the development of a number of subsidiary urban poles. In 1994, Finland introduced a specific urban policy to foster the innovation and growth of its eight largest city-regions (excluding Helsinki), initially called the centre of expertise programme (CoE), and
restructured in 2001 under the name Regional Centres Programmes (RCP). This policy had a regional focus, with balanced territorial development as a key objective. It also recognised that a certain degree of concentration was needed to reach a minimum critical mass, and included as a main objective for the allocation of funds more collaboration (and thus economic integration) between a core city and its neighbouring municipalities (OECD (2005) Territory Review of Finland). Meanwhile, a policy package has been prepared for the major urban regions, including Helsinki. In Sweden, which like Finland, was focused only on regional equity objectives, the national government has, since the beginning of the decade, paid greater attention to Stockholm supporting the initiative to foster the integration of the larger Stockholm Malar region through public infrastructure investment, social support in distressed areas (metropolitan policy) and a well designed regional innovation policy strategy (OECD, 2006, Territory Review of Stockholm). German spatial planning policy also sought to link the eleven most developed “European metropolitan regions” (europäische Metropolregionen) with smaller centres - via secondary road networks is one example.

The second main trend is that national urban policies are becoming more pro-active and forward-looking. Urban policies in the past have tended to be remedial and not pro-active. Concern with remediying the decline of industrial cities and managing issues of decay, crime and social welfare were often automatically associated with the term “urban policy” in the 1980s and even the 1990s. Today, in most member states, urban development policies are no longer solely preoccupied with the regeneration of declining areas but with programmes for creating large urban spaces capable of being such nodes and competing in the most innovative and dynamic sectors of the global economy (see Box 2.20). Such policies are resulting in forward-looking programmes which attract firms and their associated highly skilled work forces to the most innovative and dynamic sectors, are providing the high-quality urban infrastructures that these highly mobile firms and workers demand. The change in approach has not occurred because the negative issues associated with declining urban structures and aggregations of social problems in large cities have been resolved. On the contrary, these issues continue to loom large among the those addressed by urban development policies. However, a number of governments, including those of Japan (OECD, 2005, Territory Review of Japan), Germany (Bundesministerium für Verkehr, 2006), Finland (OECD 2005, Territory Review of Finland) and Norway (OECD 2008, Territory Review of Norway) have recently re-oriented their national spatial strategies in order to come to terms with the changing geography of economic dynamism. For example, Japan abolished Industrial Allocation Promotion Law in 2006 and abolished subsidies for factories moving out of metropolitan areas. Japan also deregulated universities and factories for relocation into metropolitan areas. They are developing national policy for regional innovation systems in metropolitan areas, building universities as strategic hubs and launching major infrastructural projects.
Box 2.20. Competitive Cities in a Global Economy: Summary of main findings from OECD work on cities

**Competitive Cities in a Global Economy** argues that there is no ‘one size fits all’ policy for cities. But the report makes recommendations that can be tailored to meet specific needs. These include:

- A flexible strategic vision is necessary to foster competitiveness, ensure a diversified range of interdependent ventures, and information and transportation links between universities, researchers, technicians, and manufacturers.

- Liveable cities with high-quality infrastructure, green spaces, inner city residential areas and public projects can contribute to economic success, attracting foreign investors as well as highly qualified professionals and tourists.

- Effective governance of cities depends on leadership from the national government to encourage reform, a formal government at the metro-regional level, and lower level local networks that include non-governmental actors, associations and businesses which can deal with social tensions and understand market realities.

- To balance the financial needs of cities with those of the rest of the country, cities can diversify tax revenues with “smart taxes” such as congestion charges and use public-private partnerships to raise money for public projects. Equalisation payments between metropolitan regions can be effective but national equalisation schemes to redistribute resources from richer to poorer regions sometimes disregard the higher spending needs of cities and act as a disincentive to poorer regions to increase tax revenues.


While there are successful examples of urban policy approaches that manage to preserve the growth capacity of their champion cities while enhancing the development of a number of subsidiary urban poles (such as the Finnish policy, mentioned earlier), governments are often forced to make tough choices and identify priorities. Urban policy must avoid wasting resources by trying to help cities continue growing long after they have become uneconomic, or by supporting the expansion of particular economic activities that are not guided by market signals. For example, there is room for doubt over the viability of heavy subsidies to attract FDI or to build science facilities in Newcastle, in the absence of prior experience or local entrepreneurial base. Missing linkages between firms and universities can also hamper the development of effective cluster policies, even in wealthy cities (such as Milan and Madrid). Some OECD countries have therefore identified scope for better targeted action in support of firms’ existing, market-based strategies (e.g. emphasis on SMEs in Japan’s new approach to innovation policy, building up universities as strategic hubs in the Danish-Swedish region of Öresund).

While urban policies are becoming more pro-active and forward-looking, national governments cannot overlook the negative externalities associated with urban concentration (pollution, declining infrastructure, social distress, crime, and inequalities). Ensuring a clean and attractive urban environment is increasingly recognised as an integral aspect of the creation of dynamic cities rather than a mere compensation of their consequences. There are limits to the dynamism that can be sustained by cities with
increasing traffic congestion and pollution. The introduction of a congestion charge has generally been perceived as an effective measure to limit traffic and improve the use of public transportation (e.g. London). While policies aimed at distressed neighbourhoods have produced mixed outcomes, there are some successful examples of urban regeneration policies (e.g. Bilbao, Kitakyushu, and Glasgow) which have led to the development of tourism and creative industries. Some metropolises that experienced massive urban sprawl have, at times, resorted to quite revolutionary measures with spectacular results (e.g. converting a motorway into a water stream via the Cheonggyecheon project in Seoul).

Urban development is by nature multi-sectoral and the integration of sectoral policy remains largely underdeveloped. National policies have tended to follow a sectoral approach to urban development. When urban policies included economic development objectives, such as developing regional innovation systems, building major infrastructure, or addressing the lack of employment in specific areas, they tended to be addressed in isolation. Yet, it is becoming increasingly apparent that different objectives underlying urban development cannot be treated in isolation. In light of the experiences of the major OECD agglomerations, it seems that economic growth at the metropolitan level depends on economic interdependencies as well as other factors such as social cohesion and the physical environment. Areas which are isolated from the economy and labour market of the metropolitan region are, in a sense, hindering the competitiveness of the region as a whole and compromising the achievement of collective goals. Competitiveness is only one contributing factor to improving quality of life and social cohesion; however, without a competitive urban economy, it is difficult to raise living standards and improve the environment.

More generally, no obvious distinction exists between spatial policies specific to cities and/or metropolitan regions and sectoral policies. Housing, transport, local development, environment or economic infrastructure policies all have an impact on urban areas, even when they do not explicitly target urban areas. As such, any urban policy ought logically to incorporate these different dimensions. One of the OECD’s recommendations regarding urban development is a need to develop a multi-sectoral policy avoiding juxtapositions of sectoral policies and taking into account the possible interdependencies between those policies. In practice, this is very difficult, and therefore is one of the main challenges for governments. To achieve this objective, governments must identify national sectoral policies which are not explicitly included in a defined urban policy and which have an impact on cities.

Finally, effective governance can help to foster an integrated and multi-sectoral approach to urban development. National urban policies cannot be conducted in isolation from sub-national existing planning frameworks and policies. Multi-level contractual arrangements are useful instruments as they force a better alignment between the cities’ own development strategies (by nature, more multi-sectoral) and national urban policies (e.g. the Vancouver Agreement combined federal, provincial and municipal programmes to finance projects related with economic and social revitalisation in 2000 and 2005). Implementing such collaborative mechanisms at the scale of a functional urban area can help to address the issues of horizontal collaboration between local jurisdictions, identified as one of the main obstacles for effective policy implementation for urban development (OECD2006, Competitive Cities). In Canada, the tripartite agreement mentioned above has been implemented on a scale which includes the Greater Vancouver area. Similarly, the French agglomeration and metropolitan contracts involves sub-
national actors at a larger scale than the centre city administration. National urban policy can also play a key role in promoting urban and metropolitan governance; for instance through incentive mechanisms for horizontal collaboration (fiscal incentives). Many policies that are not seen as constituting urban policy have considerable differential effects on different locations, favouring development in some areas rather than others. Some of these are clearly spatial, such as the location of airports or major research institutes, but may not always be seen as affecting cities as such. Others are only implicitly spatial, though their implications for cities and their economies can be very strong: regulatory decisions that advance or hinder specific economic sectors, which are located in some areas rather than others; constitutional arrangements that bring political prominence to some areas rather than others, for example, under schemes of devolution, or through the geographical basis of governing majorities. It is important for the success of urban policy that these “implicitly urban” policies are recognised as such. Moreover, when they are made explicit, national urban policies have still tended to follow a sectoral approach to urban development. When urban policies included economic development objectives, such as developing regional innovation systems, building major infrastructure, or addressing the lack of employment in specific areas, they tended to be addressed in isolation. This challenge can be partly addressed though multi-level contractual arrangements which force a better alignment between the cities’ own development strategies (by nature, more multi-sectoral) and national urban policies (e.g. Vancouver Tripartite Agreement in Canada).

**Strengthening the links between rural and urban regions**

The economic importance of strengthening the functional linkages between rural regions and cities is now widely recognised. The issue is broad – covering issues such as accessibility and its influence on enterprise performance, equity and access to public services, environmental protection and the link between those who preserve amenities and those that consume them, as well as issues of territorial and social cohesion. The increasing inter-dependence of urban and rural regions has several origins, including for example:

- **The diminishing share of agriculture in the economy of many rural areas**: This may lead to the development of other activities such as tourism for city dwellers and the introduction of tertiary activities in rural towns, thereby modifying their socio economic profile. Outmigration and ageing, consequences of the reduction of agricultural employment can thus be counter-balanced to a certain extent by these positive developments, witnessed in an increasing number of rural areas.

- **The expansion of urban areas into rural hinterlands**: This creates mixed-use areas which are hard to define as either urban or rural. This land is often under substantial development pressures which tend to compete with agricultural and horticultural activity.

- **Improved access to rural areas**: Substantial investments in transport infrastructures, new rapid transport technologies, deregulation of air travel and low cost flights to regional airports in rural areas, and the extension of ICT networks, are making hitherto inaccessible rural regions with lower cost housing accessible to newcomers.

- **Lifestyle changes**: The high cost of housing in major cities is fuelling a trend towards increased daily commuting over considerable distances to cheaper homes
in rural settings, leading to large “functional urban regions” which also encompass lower density/rural areas. At the same time, shorter working hours and more flexible working arrangements are inducing people to live part of the week, the month, or the year, in the city, and part in the country, while tele-work (part-time and full-time) also allows people to live and work in even remote rural areas.

- Cities of all sizes exert a strong influence on their surrounding regions. In many cases, the relationship between urban centres and surrounding regions involves strong synergies. These synergies appear particularly important where a large region is dominated by a single large urban centre, a so-called regional city or city-region. Employment opportunities and services such as banking, health care, education and training as well as shopping centres, cinemas and other cultural facilities are provided by the urban centre, while the rural regions possess lifestyle advantages that are accessible to people working in the urban area and can also be residential locations for people wishing to commute (meaning that regional cities often have very large labour market areas).

- For a long time, these cities have been overshadowed by the demographic and economic expansion of capital cities and major metropolitan regions. Now, however, the importance of regional cities as sources of economic growth in their own right and as anchors for rural regions is becoming clear. Phenomena of “counter-urbanisation”, apparent in a number of OECD countries, appear to suggest that in some cases regional cities can develop into important economic centres on the basis of good transport linkages, often including regional airports, economic specialisation, greenfield development possibilities, dynamic "entrepreneurial" universities, etc. The interest of policymakers in regional cities also stems from their ability to provide basic and some advanced services for large rural regions, which would otherwise be threatened by outmigration because of the lack of employment opportunities and low quality public services. Strong regional centres provide the principal means by which to offer the kind of social and economic infrastructures that can maintain population and retain and attract investment.

Innovative policies can be divided into two types:

- Those that aim to link the city region to the rest of the country (i.e. an outward looking, competitiveness-based perspective).

- Those that seek to enhance the synergies between the urban and rural functions within the region (including the sense of a common regional identity).

A central question is how public goods and services can be provided in a cost-effective way to support development. This raises some important issues for policy makers at both national and local levels, for example:

- How should priorities be set for public investment to build rural-urban linkages? What is the role of private investment markets?

- Do policymakers locally and regionally have the capacity and tools which allow them to address conflict and competition in land usage?

- How can rural communities plan for and develop new economic activities that depend on inflows of visitors and new residents while at the same time modernising and protecting high value agricultural activities?
Does enhanced interaction between regional towns and the core urban areas represent a rural-urban linkage strategy?

In many cases, the issue of rural-urban linkages is complicated by the issue of how to guide development in such a way that the social benefits of rural regions are not destroyed by efforts to generate economic opportunities.

Often, the “pure public good” characteristics of rural assets mean that there are few direct incentives for private actors, or even public actors, to provide, maintain or invest in the supply of amenities because it is difficult to convert this investment into revenue accruing solely, or in large part, to the investors. Nonetheless, these are clearly important assets for a region and can represent an important, and sometimes even the only, source of competitive advantage in some rural regions. Moreover, the valorisation of amenities is often the best incentive for their conservation. The central question is: how can policy makers “internalise” the externality benefits inherent in rural amenities so that providers have financial incentives to maintain and/or provide access to these amenities at a reasonable cost to the different “users” (both individual visitors and, in many cases, society as a whole). Two key elements in this process are estimating the value of (demand for) amenities and thereby setting prices and encouraging the creation of market or market-type mechanisms to transfer benefits.

Work on valuing amenities has its origins in efforts to quantify the multifunctional dimension of agriculture by separating amenity provision from commodity production functions, as well as in attempts to estimate the value of biodiversity and other ecological assets. Recreational (use) value of rural amenities can be estimated using revealed (observed, actual) preference models that are relatively robust. However, the non-use values of rural amenities expressed as, for example, willingness-to-pay to preserve biodiversity or agricultural landscapes have to be based on stated preference techniques, and are therefore more problematic. As such, the ability of policy makers to estimate the cost effectiveness of programmes that support amenities with significant non-use values is limited, which partly explains why policies to develop markets or substitute markets for amenity goods are preferred.

Instruments to ensure optimal provision of amenities can take several different forms: for example, creating direct amenity markets (paying for access, user fees); creating amenity-related commodity markets (“green” markets); the buying of resources by interest groups; incentives, taxes and subsidies to providers; etc. There are two main types of policy that include market-oriented economic instruments: firstly, policies to stimulate co-ordination between supply and demand, and, secondly, instruments that provide regulatory or financial incentives or disincentives to act in a particular way.

1. **Policies designed to stimulate direct co-ordination between amenity providers and beneficiaries,** either through the market or through co-operation among agents acting collectively.

   1. **Support for enhancement of the commercial value of amenities:** The aim is to encourage commercial transactions between providers and beneficiaries of amenities with regard to either the amenities themselves or to related products. Targeted amenities are those which are potentially private goods so that the establishment of an amenity market is possible with certain assistance, such as the introduction of a institutional framework for amenity markets, supports for the valorisation by rural enterprises, official certification on amenity value added products, etc.
2. **Support for collective action:** The aim is to promote and support actions initiated and pursued by groups of agents with a view to adjusting amenity supply and demand. Targeted amenities are those which need collective action for the maintenance and/or valorisation by providers and beneficiaries.

The specific case of green belts around large cities illustrates how countries have tried to develop mixed use or complementary use areas, where rural and urban functions exist in close proximity. For example, the Randstad shows that it is possible for farming to be highly profitable in an urban environment, but, in the process, the commodity outputs of farming become separated from the provision of environmental services (see Box 2.21). Controlled environment agriculture in glass-houses is profitable, but produces no amenities.
Box 2.21. Rural-urban linkages – managing competing land uses in Canada and the Netherlands

In Canada, land use is a provincial responsibility and each province has its own legislation, policies and programmes regarding land management and use (George Morris Centre, 2005). Ontario is the most populous province in Canada, and Toronto is by far the largest city, with a metropolitan population of 5.5 million in 2006. Moreover, the Greater Toronto Area (GTA) has grown to this level from 4.2 million in 1991. Prior to 1991, the GTA was not a defined administrative unit, but in 1971 the Toronto metro area had a population of 2.8 million, which suggests a GTA population of about 3 million. This means the population of the GTA has increased by roughly 50% in 25 years. The GTA is the main urban centre in a region known as the “Golden Horseshoe” that curls around the west end of Lake Ontario and has a population of about 8.1 million people, approximately one-quarter of the population of Canada.

The Greenbelt Protection Act in Ontario was created by the Ontario provincial government in 2005 to designate and limit development on a significant portion of rural land in close proximity to the Greater Toronto metropolitan region. The designated land consists of approximately 1.8 million acres with the potential for adding additional land. The Greenbelt includes lands that were designated for protection under the Niagara Escarpment Plan of 1973 and the Oak Ridges Moraine Conservation Plan of 2001. Additional land was added to that previously designated by these two acts to provide a continuous band around the largest urban concentration in Canada. Provisions of the Greenbelt Act require all other agencies to conform to its requirements for land that is protected by the Act.

The Greenbelt Plan, which was established under the Greenbelt Protection Act, was initiated to address the following issues:

- Urban sprawl: to keep development within specific urban boundaries and support infrastructure within those boundaries.
- Preserving agricultural land: prevent further encroachment of the urban shadow.
- Environmental protection: protection of wetlands, natural environment and natural resources.

The key objective of the Greenbelt Plan is to enhance the rural areas and the overall quality of life through: agricultural protection; environmental protection; culture, recreation and tourism opportunities; support and sustain a vibrant rural community; support infrastructure and recognise the benefits of protecting renewable and non-renewable resources.

The Netherlands has known a long tradition of land use planning in which separation of urban and rural areas was a key concern. Zoning policy has been used to manage the spatial demands of diverse interests. This holds in particular for the demand for houses and business sites on the one hand, and agricultural land use on the other (Overbeek and Vader, 2006). The Randstad is the most urbanised part of the Netherlands. It contains the major cities of Amsterdam, Rotterdam, Utrecht, The Hague and Delft, as well as a number of satellite urban areas. These peri-urban areas are often embedded between several cities and are used for work and recreation not only by urban citizens that live closest, but also by citizens of several nearby cities. However, the Randstad is a major agricultural producer, especially for greenhouse agriculture, and also has a significant dairy sector.

Dutch spatial policy established eight buffer zones in the region in 1958 as a way to control urban sprawl and maintain green space (van Rij, Dekkers and Koomen, 2008). While there has been continual pressure for urban expansion, there continue to be considerable amounts of green space for a large urban population (OECD 2008 Farmland conversion: the spatial dimension of agriculture and land use policies – COM/TAD/CA/ENV/EPOC(2008)18/Final).

A key factor to success has been strong land-use controls accompanied by government purchase of land (Allermon, 1997). On acquiring land, the government guarantees that its use will not be changed. This combined with a comprehensive land plan that originates at the national level and is reinforced at the provincial and local level, assures that development pressures are shifted away from land designated as green space.
Conclusion

Over the past few years, OECD countries have promoted a new paradigm of regional policy which should evolve from short-term subsidies into a much broader family of long-term development policies designed to enhance regional competitiveness. The rationale of the new regional approach is based on the principle that opportunities for growth exist in the entire territory, across all types of regions.

In the context of new regional development policies, governments are increasingly emphasising that innovation is a crucial target for policy. Innovation is being redefined at national level, and local knowledge is refined to play a stronger role in shaping policies. Policy frameworks, governance arrangements and funding streams need to adapt. The national level should set a broad framework while the region takes advantage of local knowledge to better target policy action. A clear division of labour helps avoid duplication and improves outcomes. But not all regions can be leading innovation hubs. Some regions (not only rural but also some industrial and urban regions) perform poorly because of institutional problems, notably a lack of critical mass or culture of networking that support innovation. A focus on regional innovation systems helps mobilise assets and actors even in less advanced regions.

Despite economic and demographic challenges, rural regions are not necessarily synonymous with decline. Distinctive advantages related with higher quality of life and the existence of various natural and cultural amenities have fostered a rural renaissance in some countries, as made visible in recent migration trends. Certain small and medium-sized settlements were able to seize niche markets as alternative sources of growth in the face of relative decline of agricultural employment. New rural policy aims at valorising under-utilised resources and promoting employment opportunities in rural economies while preserving the environment and adjusting to an ageing demographic structure.

The new paradigm also endorses a more pragmatic approach to urban development. While cities often serve as key engines of national growth, paradoxically some of them perform below national average in almost all socioeconomic indicators. Ensuring a clean and attractive urban environment is increasingly recognised as an integral aspect of the creation of dynamic cities rather than a mere offsetting of their undesired consequences. Urban policy is therefore increasingly concerned with addressing the negative externalities of urbanisation and maximising economies of agglomeration by providing collective goods.

There is a growing recognition that rural and urban areas are more strongly interlinked than has been thought in the past. Rural areas in close proximity to urban areas provide a flow of environmental and recreational services to urban areas. In some countries, virtually the entire rural territory is within easy reach of urban residents who commute to work on a daily basis. Because of such economic connections, regional development strategies need to take into account the cascading effects of policy decisions that link rural and urban regions.
Notes

1. According to OECD estimates while at present there are four active people for each retired person in the OECD, this figure is projected to fall to around two to each retiree in 2050.

2. Mobility refers here only to the spatial component, but mobility also refers to sectors and job families.


5. See also OECD, Benchmarking of Science Industry Relationships, 2002.

6. The 1999 Industry Revitalization Law (also known as the “Japanese Bayh-Dole Act”) reduced obstacles to collaboration between universities and private enterprises and also allowed private firms to acquire intellectual property rights from publicly-funded research. This has given stimulus to the growth of Technology Transfer Offices in Japan, of which there are now 37. See also: J. Rissanen and J. Viitanen, Report on Japanese Technology Licensing Offices and R&D Intellectual Property Right Issues, The Finnish Institute in Japan, 2001.

7. In the past, the effective impact of sectoral policies in terms of spatial planning was not monitored thoroughly.

8. The Australian Federal Government is spending up to A$70 million over 5 years to establish ‘transaction centres’ in small rural towns providing general services and basic business services.

9. The Pearl River Delta Metro region (or Pearl River Delta Economic Zone) covers 9 prefecture level cities in Guangdong and is officially defined as including Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Dongguan, Zhongshan, parts of Huizhou (the urban district of Huizhou, Huidong County, and Boluo County), and parts of Zhaoqing (the urban district of Zhaoqing, Gaoyao, and Sihui). The Yangtze River Delta Metro region covers Shanghai, eight cities in Jiangsu province (Taizhou, Zhenjiang, Changzhou, Wuxi, Nantong, Suizhou, Nanjing, and Yangzhou), and 7 cities in Zhejiang province (Jiaxing, Hangzhou, Ningbo, Shaoxing, Huzhou, and Taizhou). The Pan Bohai Metro region covers Beijing, Tianjin and the Heibei province.

10. Valuation approaches have also come to the fore in efforts to quantify the environmental damage caused by oil spills for the purpose of determining costs to be borne by the polluter. Economic valuation is widely used in OECD countries as a way of assessing values (usually monetary) to goods that have no markets. Valuation methods are used to support or argue against projects and policy choices. The political relevance of the debate stems from the technical and ethical difficulties of assessing the value of non-market goods. This means that the validity of much of the information presented to or by governments, in defense of key arguments in domestic and international policy debates, is often contested. Economists have developed a variety of techniques to value non-market environmental and cultural amenities consistent with the valuation of marketed goods; i.e. based on individual preferences.
Even when the methodology may be sound, the fact that many estimates (particularly of non-use values) are based on hypothetical “contingent valuation” surveys, means that the results cannot be taken too literally. There may be large differences between what people say they are willing to pay and what people actually disburse. To test this disparity, a willingness-to-pay mail survey that was followed by an invoice requesting the sum that the respondent had claimed to be willing to pay. While many people paid, the discrepancy was nonetheless large.
CHAPTER 3

Effective public investment in regions: the governance challenge

Introduction and main points

This chapter discusses the various ways that national and sub-national governments have adopted to solve the problems of coordination that arise from mutual dependence between levels of government for supplying a bundle of sectoral policies -- services and infrastructures-tailored to specific needs and opportunities of sub-national territories. This chapter first examines the basic institutional and financial elements regarding sub-national authorities’ mandates and resources, and then goes on to focus on the use of specific instruments for addressing co-ordination and capacity building challenges related to regional policy: contracts, collaboration between municipalities and the use of performance indicators.

KEY POLICY MESSAGES

- Regional policy needs to be better co-ordinated at the national level, with roles well defined.

- An effective use of knowledge in the policymaking process requires appropriate mechanisms for dialogue and co-ordination within and across levels of government as well as across public and private spheres.

- A unified, co-financed, and multi-year funding for regional policy helps ensure the credibility and effectiveness of public investment.

- Monitoring and evaluation mechanisms need to be strengthened to ensure policy learning.

Why is governance needed for effective regional development?

The previous chapter analysed the forces that lead to disparities in regional income levels and growth, and the impact of policy choices on such disparities. It also emphasised that the focus of regional policies has moved from income redistribution, aiding the poorest regions, to regional development, enhancing economic performance and growth prospects in all regions, including the most advanced. This change of focus towards regional competitiveness calls for the ability to define and implement different
regional strategies, based on regional specific challenges and opportunities. The national ambition for regional policy is that these different regional approaches allow for and contribute to national development and competitiveness.

Regional competitiveness as has been underlined in previous chapters rests on networked forms of production. Firms are thus more dependent on the local environment in which they are located. In order to develop and prosper, firms need to use all sorts of infrastructures, goods and services that can be considered as “local collective competition goods” (Crouch, et al. 2001). They may concern availability of relevant skills, access to information, access to a series of network infrastructures (transport, broadband etc.). These goods and services complement and specify the basic conditions for investment and development that are provided by access to a set of essential public goods (Setting Standards for Local Public Goods Provision: Challenges for Regional Development, Symposium Co-organised by the OECD and the Department for Development Policies of the Ministry for Economic Development, Rome, Italy, June 2007) Social cohesion is not incompatible with territorial competitiveness. On the contrary, regional strategies with economic, social and, increasingly, environmental ambitions represents one of the strengths of regional policy, but makes its implementation more challenging, and as such is strongly influenced by a variety of policy interdependencies.

Programmes of innovation, growth and cohesion can be more efficient if resources are pooled and information is shared. Collaboration, whatever its form, between different government and non government bodies, vertically or horizontally, exists in the great majority of countries to bring about coherence and greater impact from public investments (more appropriate selection as well as funding and implementation monitoring). As far as regional development is concerned, all countries pursue policies in many different areas, with just a small number specifically aimed at regional development (Statskontoret, 2007:2). The key issue concerns the lack of co-ordination between these different policies, as well as between the variety of their providers and constituencies. Because of fragmented approaches, countries, in the great majority of cases, face problems of overlapping, or even conflicting aims between the public authorities responsible for policies aimed at creating a regional impact. This fragmentation has consequences on the regional effectiveness of public policies as well as on their national impact. Local dynamic actors can miss opportunities to invest in and to benefit from competent skills and knowledge. The question is how to find a coherent and effective approach. Public organisations (sectoral ministries, levels of government, agencies, etc.) find themselves in a situation of interdependence, where joint efforts, whether horizontally between line ministries or between sub-national authorities, or vertically, between levels of government, are necessary to solve problems. While in most countries some instruments are explicitly designed to support regions or the economy in general, other instruments are designed for other purposes, but are nevertheless important for regional development.

A necessary condition for implementing regional development policy is strong regional governance which, with effective leadership, supports the definition of regional strategy, the building of local networks, and the participation of all relevant stakeholders. The interpretation of what regional governance is and where its strengths lie, however, differs across OECD countries. Whatever the country, its unitary or federal constitution and the degree to which it is decentralised, central authorities continue to finance a large share of regional development programmes, in order to ensure that they are cost effective and consistent with national and inter-regional goals, even if they do not enjoy all the legal powers necessary to do so. In order to implement these two complementary
mandates, at the regional and the national levels, collaboration and dialogue between levels of government are necessary to redress the balance between two different types of asymmetries: financial ones (when fiscal gaps occur between resources raised in a place and the cost for financing mandated public services); and informational ones. The latter concern the capacity of sub-national authorities both to define their own strategy for long-term development and to implement national policies for regions. Even if regional and local actors are often in a better position than central government to design local solutions to local problems, central government remains a key partner for developing national strategies and supporting the creation of local capacity. The implementation of regional policy in a consistent way can, therefore, fill the “knowledge gaps” between central and sub-national levels of government. The efficient collation of relevant information is essential for creating a common frame of reference for regional policy.

Sub-national governments are playing an increasingly important role in public investment and expenditure, reflecting the increased devolution of responsibilities to the sub-national level. The rationale behind this is that such authorities are “closer to the ground” and are therefore better placed than the national authorities to decide where the priorities lie for optimal regional and local development programmes. However, it is precisely because they are closer to the ground that they are less able to take into account development strategies at the national level, creating the potential for conflict between regional and national policy goals. In addition, the transfer of responsibilities is comparatively recent in some countries, entailing the risk that some sub-national governments implement policies inefficiently. It is clear, therefore, that central governments have a role to play in supporting capacity building, for financial support, and for orienting local development policies toward the maximisation of positive spillovers to the rest of the country.

There is a distinct trend towards greater decentralisation in many OECD countries. In the ten years between 1995 and 2005, the share of sub-national expenditure in total government expenditure grew from 31% to 33% (Figure 3.1). This increase in sub-national expenditures reflects both the allocation of new responsibilities to the sub-national level and increasing costs in local public service delivery. Across OECD countries, the transfer of competencies and revenues at sub-national level over the past three decades has addressed different considerations, including political/democratic (closeness to citizens) and economic and social (improved allocation of public services). An important dimension to keep in mind is that the degree of maturity of democratic institutions and administrative capacities are determinants for the success of decentralisation reforms (Box 3.1).
Box 3.1. Brief summary of selected empirical studies on decentralisation

Most empirical studies that rely on observations over time find a positive correlation between decentralisation and government responsiveness (Faguet, 2004; Bossert et al., 2003; Fisman and Gatti, 2002; and Shah, 1998). Decentralisation can help public administration become more efficient. Local administration of public services may increase their efficiency by making use of local knowledge in local decision making and problem solving. Sub-national governments have an advantage over central governments for making use of local knowledge and networks in the provision and production of public services. However, it is important to consider the nature of the specific collective goods and services. For some it may make sense for the municipal or the regional government to take increased responsibility for reasons of proximity or local knowledge, while for others it may be the central governments that for reasons of scale or capacity are in the best position to provide them efficiently.

The relationship between decentralisation and administrative efficiency is complex. A review of cross-national analyses of decentralisation and its effects on administrative efficiency showed that at the aggregate level, this relationship is highly dependent on the specific context. A case in point is a 2006 quantitative analysis of 35 countries which showed a difference in the effect of political decentralisation on government efficiency in rich and poor countries. The authors detected a positive relationship between political decentralisation and efficiency in rich countries but a (non-significant) negative effect in poor countries. The institutional set-ups in developed countries may not work in developing countries (O'Dwyer and Ziblatt, 2006).

Literature abounds with arguments for and against decentralisation as a means of promoting economic growth. Economists who favour decentralisation often assume that it leads to better resource allocation and a more productive, and possibly smaller, public sector (Oates, 1972, 1999; Shah, 1998; Tiebout, 1956). Their logic is that locally determined policies are better able to take account of local conditions for the provision of public goods, such as infrastructure, health and education. Others assume that decentralisation will produce healthy competition among different levels of government, which in turn will promote lower tax rates and the efficient delivery of public goods and services (Brennan and Buchanan, 1980). Others have argued that decentralisation may also give local governments incentives to innovate in the production and supply of public goods and services (Vasquez and McNab, 2003, cited in Thornton, 2007).

Economists who are more sceptical about the economic benefits of decentralisation argue that it poses many difficulties for managing macroeconomic policy, especially in terms of ensuring fiscal co-ordination and implementing stabilisation policies (e.g. Prud'homme, 1995; Tanzi, 1996). More specifically, several studies question the desirability of transferring responsibility for revenue and expenditure functions to local levels because a tax assigned to local governments might be more efficiently managed centrally – it depends on the nature of the function and the problems that the government seeks to address. Other research also reveals the potential reinforcement of territorial disparities as a result of decentralisation owing to pre-existing inequalities, especially when decentralisation is not accompanied by relocation of funds and institutional and technical support to match the new responsibilities (Rodriguez-Pose and Gill, 2003; Sanchez Reaza and Rodriguez Pose (2002). Finally, arguments that link decentralisation and economic growth assume that the decentralised units have sufficient institutional skills to carry out the delegated competences, but this is not always the case.

The increase in sub-national competencies has not decreased their dependence on central government for financial resources. Indeed, the increase in sub-national expenditures has often been covered by higher intergovernmental grants. The growth of transfer systems has tied central and sub-central fiscal policy and outcomes more closely together.

Multi-level governance is always required for managing public policies in a decentralised context. In Spain, there are 36 “sectoral cooperation conferences”, bodies which operate sectorially in areas where competences of the Central Government and the regional Autonomous Communities are interrelated and need to be coordinated. Interdependencies between levels of government have a different nature: institutional (when the allocation of responsibilities remains unclear); financial (when central and sub-central governments are co-funders of public spending in regions) and socio-economic (when issues and outcomes of public policy at one level impact on other regions and at the national level). A full separation of responsibilities and outcomes in policy making is, therefore, not possible. Even in the US, the federal government has progressively increased its role through intergovernmental regulations imposed on state and local governments. The U.S. Advisory Commission on Intergovernmental Relations has even provided taxonomy of “federally induced costs” (Posner in Conlan and Posner 2008, pp287).

Managing relations between central and sub-national governments is necessary for two main reasons. At the very least, citizens, wherever they are located, should be able to enjoy equal access to a basic set of public goods and services. Regional policy should also enhance the growth prospects of regions by raising their competitiveness. As such, the equity objective in regional policy attempts to reduce disparities between people living in different places, while the growth objectives in regional policy might on the contrary result in widening disparities.
The cost of regional service delivery is strongly influenced by its size and population density. Differences in geographic location, population size, demographic trends, and social composition all affect the cost of providing public goods and services in different places. More populated regions benefit from economies of agglomeration up to the point where they are outweighed by congestion costs (OECD 2007, *Competitive Cities*). Moreover certain goods and services (e.g. hospitals, motorways) can be produced efficiently only beyond a minimum scale. Thus the provision of public goods in sparsely populated or remote regions tends to be either more costly or sub-optimal. Proximity disparities are sometimes even stronger than urban versus rural ones (OECD 2008, *OECD Economic Surveys: France*).

It was noted earlier in the report that regional policies that focused mainly on transferring income to the inhabitants of the poorer regions were falling out of favour. It was argued that, in any case, standard national progressive tax and social benefit programmes are superior instruments for transferring income from richer to poorer households, wherever the households are located. Nevertheless, a region that has a high proportion of poor households will also have a low tax base from which to finance the provision of public services for which it is responsible. Since there is a consensus that citizens should enjoy the same or similar level of access to, and quality of, public goods and services wherever they live, there is a strong case for inter-regional transfers of resources to make this possible.

**Accountable and credible leaders are crucial for policy design and implementation**

Differences among levels of government are not limited to costs and resources. They also concern capacities of sub-national governments, both to implement national policies and to define their own strategy for long-term development. These capacities might be related to the level of education of municipal staff (Sedesol, 2002), weaknesses in project management and budgetary practices, or difficulties in responding to local citizens preferences and firms’ needs. In turn, capacities can be negatively affected because preferences are not expressed, because democratic processes for improving electoral accountability remain limited and/or because of ignorance about how co-operation with private entities should be organised in order to enhance social capital local resources.

Addressing fiscal and knowledge gaps requires concerted interventions by sub-national and central levels of government. They also require stimulating adequate effort by different actors in charge of regional policy elaboration and implementation. In order to select targets for sub-national programmes, countries might use experimentation and pilot cases which contribute to identify best practices (thanks to specific incentives given to “innovative regions” to compensate for risks taken and to contribute in building information accessible to other regions; Oates, 1999).

However, the greater the differentiation of place-based policies, the more challenging will be the consistency of regional policy. Two types of benefits can emerge from consistency: in an allocative perspective, consistency enhances the efficiency of policy by avoiding contradictory public actions, duplication of resources, etc.; in a dynamic perspective, consistency would make for less asymmetry of information, identification and diffusion of good practices, and thus not losing opportunities for action. The rationale for country specific multi-level governance instruments arises from the need to have both sub-national ownership and central intervention..
In all countries, “deconcentrated” units are the specific representatives of the central government in regions. They cannot be considered as a substitute for sub-national government headed by elected officials (despite what is suggested in Evans and Manning World Bank, 2004) for three reasons. First, accountability to local citizens and firms is a more effective mechanism than accountability to the central level for representing, promoting and addressing local challenges and opportunities. Second, the relevance of regional strategies depends on information possessed only by local actors. Finally, it is desirable to integrate the specific knowledge of local and regional actors in the policy-making process, thus enriching national knowledge via regional experimentations. Some OECD countries do not consider deconcentration and decentralisation as substitutes but rather as complements (which can lead to duplication in public spending) as in France, United Kingdom, etc.

Although there is no master plan for assigning competencies across levels of government, some common trends across countries are noticeable. Examples of EU countries (Dexia, 2005) show that environmental responsibilities are very often at local level (water, waste, roads, urban planning) with sub-national spending in this area accounting for three-quarters of total government expenditure. Economic development, culture and tourism are often shared more or less equally among levels of government, with the sub-national share rising somewhat. In 2004, primary and secondary school buildings were the responsibility of sub-national governments but remuneration of teaching staff was a central responsibility in half of the European countries. Public health is also often shared (for example, in 2004, hospitals were a sub-national government responsibility in just six EU countries). Municipalities are generally responsible for providing and managing basic community services, while higher-tier local governments are responsible for supra-municipal tasks such as health, roads or economic development. Some basic criteria relevant to the allocation of competencies are given in Table 3.1. However the weight given to each is more historical and political than economic and it is rarely possible to implement these theoretical principles. In addition, allocating responsibilities to sub-national authorities has been shown to have limited impact on the differentiation of strategies implemented in each place (as shown by Madies, 2001, regarding local aid to firms and “mimetic” choices about sub-national tax rates).

Table 3.1. Criteria for the allocation of competencies

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Decentralisation</th>
<th>Centralisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preferences</td>
<td>Heterogenous</td>
<td>Homogenous</td>
</tr>
<tr>
<td>2. Scale economies</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Spillover effects</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Congestion effects</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>5. Decision costs</td>
<td>If they increase in function of the size of the group</td>
<td>If they decrease in function of the group</td>
</tr>
</tbody>
</table>


Beyond the relationships between central and sub-national levels of governments, there has been increasing acknowledgment that purely public intervention has its limits, and this has opened the way for greater co-operation between the public and the private sector (OECD 2005, Building Competitive Regions). In fact, the involvement of private actors in the supply of so-called local public goods is nothing new (even if there has been a recent increase in the use of these methods in the fields of social welfare, environmental
protection, etc.) and there are some who regard it as the key element in the definition of governance. As long ago as 1974, Coase (Nobel Prize 1991) relied on the example of lighthouses to expound the notion of the public good. The metaphor of the history of lighthouses and maritime signalling helps to understand that a public good does not necessarily have to be supplied by the government. Indeed, throughout the centuries, lighthouses have been built and managed by private investors, maritime corporations and associations from the public and private sectors (Coase, 1974; 357-76).

Public-private partnerships (PPPs) are increasingly important for the financing of large public investment projects. PPPs are contractual agreements between a public agency and a private firm which can take different forms (Box 3.2). Through this agreement, the skills and assets of each sector (public and private) are shared to deliver a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the potential risks and rewards. From the public sector’s point of view, there are two major attractions. First, PPPs enable an authority to lever additional finance without recourse to fiscal means. Second, they split the costs and risks of projects between the public and private sectors, tapping into the expertise and economies of scale available in the private sector that are rarely exploited for public policy. The key issue in assessing the use of PPPs is whether they bring about any increase in efficiency and effectiveness.

### Box 3.2. Forms of public-private partnerships

Public-Private partnerships can take many forms, such as the following:

- The private sector operates the facility for a fee. The public sector retains responsibility for capital costs.
- The private sector leases or purchases the facility from the public sector, operates the facility, and charges user fees.
- The private sector builds or develops a new facility, or enlarges or renovates an existing facility, and then operates it for a number of years.
- The private sector builds the required infrastructure, operates the facility for some specified period of time, and then transfers it to the government.
- The private sector builds and operates the facility and is responsible for capital financing. The public sector regulates and controls the operation.
- The private sector builds the infrastructure and then transfers ownership to the public sector.


At the same time there are certain risks involved with PPPs, in particular asymmetries of information and of commitment between the different parties. The private partners need to participate at as early a stage as possible, so that they can suggest initial infrastructure development plans or alternative plans. On the other hand, early
participation of the private sector may produce transparency and accountability problems. Plans proposed by firms may concentrate on their own returns rather than the overall socio-economic benefits to a region. It is therefore important for policy makers to ensure procedures of enhancing positive externalities of the projects without sacrificing the private innovations. The public sector should decide the prioritised lists of overall infrastructure projects and undertake feasibility studies for each project before the decision is taken as to whether any one would be implemented with private participation.

However, beyond the advantages and risks associated with the co-financing of public investment with private actors, the main issue is the shared will of the different actors to improve their living conditions and the economic development of the territory. The economic dynamics of the regions require that all the actors at national, regional, and local level, from the public as well as the private sector, be involved in decisions regarding their future. In an economy that places very high value on knowledge, regional development policy cannot afford to disregard the cognitive resources available. The participation of private key actors in the very definition and implementation of regional development strategies is directly attached to the notion of leadership at the local level that varies significantly according to the institutional framework of OECD countries (Box 3.3). Local and regional leaders are often responsible for making the financial arrangements when drawing up contracts between levels of government (see below).
Box 3.3. Leadership for regional innovation strategies

One of the most challenging roles for the public sector in support of regional competitiveness is the ability to bring together public and private actors behind a common regional strategy. In a regional innovation system, the type of leadership style will depend on many factors, including:

The size of the regional innovation system (RIS) describes the number of actors engaged in the regional innovation journey, their sectoral origin and their relative independence of interest and thinking. For example, some regions might be characterised by a single strong sector (such as telecommunications), dominated by a single industrial player (such as Nokia) and supported by a local university (like the University of Tampere). There is little diversity in such regions. Other regions might boast several strong players across different sectors, like in the North West of England.

Dispersal of regional decision making describes the degree of regional independence and autonomy including: the internal regional hierarchy; the regional political structures of accountability and softer dimensions such as the extent to which powerful actors permit other actors’ freedom of behaviour. For example, the city of Barcelona has considerable autonomy as the seat of the Catalan province, whereas English cities in general remain largely dependent on the central government in London.

- **“Orchestral leadership”** has a few conductors who co-ordinate many innovators. In “orchestral” regions, the central focus of the innovation journey lies in a small number of leaders “conducting” a large and diverse cadre involved in innovation.

- The **“barber shop quartet”** is skilful, but for a small audience. The process in “barber shop quartet” regions is led by a few people, largely for the benefit of those few players – typically a small number of universities or multinational organisations.

- The **“enthusiastic improvisation”** region has difficulty in finding a balanced tempo. “Enthusiastic improvisation” regions are those with relatively few leaders, but with more general regional willingness for encouraging innovation policy – there is much amateur leadership and very little collective achievement. A number of different activities may run parallel, without effective coordination between them.

- The **“jamming super-group”** region has to keep “big names” together effectively. “Jamming super-group” regions are those with a successful innovation community with multiple and competing visions for innovation policy, and a remarkable capacity for innovation. When they function well, these regions make innovation appear effortless, even normal, which is the case in Silicon Valley.

Financial resources for equalisation and for regional development pose different governance challenges

In areas where both total public spending and sub-national responsibility are traditionally large, the sub-national spending ratios have either risen slowly (education) or even declined (healthcare, for which trends towards “recentralisation” has been observed in some countries, Salman, 2008). Social protection, the public spending item with the highest overall increase, is strongly centralised, and therefore, relative spending growth has little impact at the sub-central level in most countries. Spending patterns suggest that sub-national governments have so far escaped the fiscal pressure of demographic change, either because this pressure affects the central level more than the sub-national level (social security) or because policy measures such as intergovernmental transfers have compensated (education, family and childcare). Apparently, redistributive policies remain largely a central government competency (OECD 2008, Network on Fiscal Relations across Levels of Government).

However, spending pressure at the sub-national level varies considerably subject to a country’s institutional set up and may also change. In Australia, for example, sub-national needs might increase since responsibilities such as education, childcare, elderly care and transportation infrastructure (all sub-national competencies) are growing faster than general government expenditures (Aigenger et al., 2006). In France, the evolution of standards for environmental reasons is responsible for a major increase in sub-national public investment spending (OECD 2006, OECD Territorial Review: France.).

Sub-national governments are the main contributors to public investment accounting for nearly 70% of public investment in Europe. The central government’s role is increasingly a guide and a warrantor of national consistency in regional policy.

Figure 3.2. Capital Expenditure by regional and local authorities; 1995-2004

Source: Eurostat
Sub-national governments have two main revenue sources (beyond borrowing): their own tax revenues and revenue from intergovernmental grants (they might also benefit, to a minor extent, from fees and charges (OECD 2008, Network on Fiscal Relations across Levels of Government). Normative principles of fiscal federalism provide a relatively clear set of rules for the balance between grants and taxes. In theory, own taxes should be the primary revenue source for efficiency concerns, while transfers should be used as a supplementary revenue source to correct for externalities, act as an insurance buffer, or redistribute resources between regions. In reality, countries do not completely adhere to the normative view, nor do federal or unitary constitutional frameworks appear to be key explanatory factors. This deviation from assumed optimality reflects the variety of roles attributed to sub-national governments in OECD countries, the variety of national approaches to ensure fiscal equalisation, the extent of externalities from sub-national policies, historical circumstances and a variety of political concerns (OECD 2008, Network on Fiscal Relations across Levels of Government). An additional element is that sub-national governments are sometimes unwilling to exploit all of their potential taxing power, with very different national attitudes related to the political risk attached to high levels of local taxes, which would appear to be higher in Spain than in Scandinavian countries. Sub-national tax competition (the same for fees) might also present a risk of “race to the bottom behaviour” from sub-national governments (in delivering sub-national public services) for attracting private investments.

Central governments and sub-national governments co-fund sub-national policies. By using different financial mechanisms it is possible to influence their outputs. For the sub-national government, the possibility of keeping part of local wealth for sub-national policies is a key incentive mechanism for economic development (this partly explains fiscal equalisation reforms in countries like Portugal or Switzerland). From the central government point of view, a variety of transfers can be allocated to sub-national governments for fulfilling the main functions associated with the CG role: (OECD 2006, Journal of Budgeting), namely: to enable sub-national governments to finance a basic package of services for which they have competencies (or to reach imposed standards); subsidies to compensate for spillover effects from sub-national policies; and equalisation (provision of similar services with a similar tax burden).

OECD countries adopt very different patterns for financing their sub-national through transfers (Table 3.2). Types of grants have to be consistent with their objectives. Non-earmarked grants are usually more efficient instruments for financing and equalising purposes than earmarked grants, although earmarked grants can be relevant for risk sharing projects, temporary co-operation projects and expenditures which need guidance from central to sub-national decision makers. For regional development objectives, earmarked grants are a good financial instrument through which CG can support regional strategies and contribute to sub-national capacity building. Among the variety of possible conditions associated with earmarked types of grants, some can be more favourable for collaboration between levels of government than others, as shown by the recent evolution of Japanese grants for urban renovation (Box 3.4). In Spain, the new regional funding system, approved in 2001, splits the inter-regional compensation fund into two investment instruments: the compensation fund and the complementary one. Allocation of these resources to the different investment projects is agreed between the Central government administration and the regional Autonomous Communities in the Public Investment Committee.
### Table 3.2. Grant revenue by type of grant, 2004

As percent of total grant revenue

<table>
<thead>
<tr>
<th>Country</th>
<th>State</th>
<th>Local</th>
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<td>Australia</td>
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<td>Austria</td>
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<td>Belgium</td>
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<tr>
<td>Canada</td>
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<tr>
<td>Czech Republic</td>
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<tr>
<td>Denmark</td>
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<tr>
<td>Finland</td>
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<td>-</td>
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<tr>
<td>Greece</td>
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<td>Hungary</td>
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<tr>
<td>Iceland</td>
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<tr>
<td>Italy</td>
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<tr>
<td>Korea</td>
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<td>Mexico</td>
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<td>Netherlands</td>
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<td>Norway</td>
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<td>Poland</td>
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<td>Portugal</td>
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<td>Spain</td>
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<td>Sweden</td>
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<tr>
<td>Switzerland</td>
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<tr>
<td>Turkey</td>
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<tr>
<td>Unweighted average</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Source:** Fiscal Network Database
Box 3.4. Community renovation grants in Japan

Conventional subsidy schemes for public infrastructure did not take into account a municipality’s autonomy in community development and attracted criticism for the creation of regimented towns. In 2004, Community Renovation Grants were established in order to implement a unique community initiative development that brings together regional history, culture and natural environmental features. This grant differs from conventional subsidies in the following ways.

(1) Bottom-up project decision-making

If a project concerns community development, the transfer allows for a very wide range of uses including soft infrastructure like workshops with community inhabitants. Grants can be used in accordance with plans formulated by the municipality under a system grants a high level of autonomy to the municipality.

(2) Shift from sector-based support to integrated programmes

National supervising bureaus have been established, allowing for effective distribution and management of subsidies.

(3) Improved accountability

Selected projects are undergo a preliminary assessment for impact, efficiency and feasibility, before a second assessment to determine cost efficiency and residual economic effect, utilising PCD (Plan-Do-Check-Act” as used in business process improvement) cycle after completion of the project.

Community development grants used by municipalities totalled JPY 133 billion for 355 districts in FY2004, jumping to JPY 251 billion for 1428 districts in FY2008. As of in FY2009, the government is planning to raise the upper limit for projects concerning priority policies.

Source: MLIT Japan 2009

Whatever its important characteristics and results (Box 3.5), income equalisation is a passive, corrective fiscal policy with no growth and development strategy behind it, and there is a case for concurrent policies aiming at productivity increases in sectors such as transportation, research and education, and regional development (OECD 2007, Network on Fiscal Relations across Levels of Government). Like any other redistributive programme, income transfers can result in potentially adverse fiscal and economic incentives for sub-national government. In particular, large transfers can discourage the growth of own resources through economic development (“poverty traps”). The fiscal role of central government is not limited to redistribution but also concerns supporting regional development, which may indicate earmarking of grants. In Norway, for example, where welfare costs heavily burden local finances, some sub-national governments have expressly asked the central government for earmarked grants to help finance regional development strategies.
Box 3.5. Fiscal equalisation in OECD countries, main findings

- There are two main distinctions among fiscal equalisation systems: horizontal (among different regions) vs. vertical equalisation (from the central to sub-central levels of government) on transfers; equalisation of revenue disparities vs. cost disparities.

- Fiscal equalisation makes up around 2.3% of GDP (between 0.5 and 3.8%; between 1.2 and 7.2% of government expenditures; between USD 110 and 1200 per capita).

- Equalisation reduces fiscal disparities: by 2/3 on average; horizontal systems seem to show a slightly stronger equalising effect per GDP.

- Equalisation can pose a problem for budget stability (less likely for horizontal systems).

- Revenue equalisation can reduce tax and development efforts (risk of poverty trap).

- Cost equalisation is prone to rent seeking.

- In systems in which only fiscal capacity is equalised, metropolitan areas will usually be net contributors. In systems in which only cost differences are equalised, metropolitan areas will usually benefit, as will remote, rural areas.

- The choice of standardised revenue or cost bases can mitigate disincentives; as well as having an independent body that allocates equalisation transfers.


Box 3.6. Fiscal instruments for regional development: some findings

Fiscal instruments need to be adapted to the objective: while general purpose grants are better appropriate for equalisation purposes, earmarked grants seem to be more adapted for regional development.

Transfers from central governments cannot be limited to equalisation purposes. Co-funding solutions by central and sub-national actors are the most suitable for regional development programmes. Shared financing such as this takes the form of earmarked grants. These types of grants can target sub-national capacity building but have to remain bounded solutions since they can have adverse effects and may entail bureaucratic costs.

Own revenues from taxes reinforce sub-national accountability. However, the financial participation of central/higher government is necessary to ensure the coherence of regional policies.

Whatever the level of their financial resources, sub-national governments are, to a large extent, the main providers of public investments.
The use of contracts for regional strategic planning and investments

**Vertical contractual relations between levels of government**

Regional development policy requires co-funding mechanisms that differ from central government support for income equalisation. In order to be able to both create dialogue and trust among partners in regional policy (essential conditions for revealing needed information) and to select the most appropriate projects for regional development, OECD countries have largely adopted “co-opetition” arrangements between levels of government, that is to say a mix of cooperation and competition. These arrangements, largely inspired in European countries by European Union practices for distributing regional policy funds, are based on both selective processes among rival projects for local development, each of them based on participatory practices; and the acknowledgement of interdependency among central and sub-central governments for deciding and implementing the selected regional strategies.

A “contract” here refers to the bilateral agreements between central and sub-national governments concerning their mutual obligations, *i.e.* the assignment of powers of decision, the distribution of contributions (including financial commitments) and mechanisms to enforce the contract. In the European Commission jargon, these contracts are instruments for setting *conditionalities* for the support of higher levels of government for the development of territories. These conditionalities imply multi-sectorial contract between parties, financed through earmarked and co-funding mechanisms, for addressing agreed targets, with a set of performance indicators that contribute to monitor long term collaboration, assess the delivery of policy and support capacity building at local level. The effectiveness of this type of agreement is strongly dependent on enforcement structure and specific clauses in case of a violation on the part of one of the parties.

There are many possible types of contractual arrangements and the OECD has developed an approach for assessing their efficiency, based on the distinction between “transactional” and “relational” types of contracts (Box 3.7).
Box 3.7. Typology of contractual arrangements among levels of government

A contract between levels of government is any arrangement re-organising, along with the constitution, the rights and duties of government. The specificities of such contracts (compared with those which imply private actors’ participation) are the absence of regulation by competition (the choice of the partner, especially the central one, is rather limited, and contracting is frequently mandatory) and the fact that contracting parties have no recourse to “vertical integration”. Consequently, contractual choices are more limited than in the case of contracts in general and the logic of contracting is strongly influenced by the need to organise an unavoidable co-operation. Assessment of such contracts should focus on learning and seeking efficiency rather than on exit strategies.

Contract theories highlight the existence of the various types of logic of contracting from “transactional” to “relational” (there are many possibilities for mixing between these “extremes”):

- “Transactional”: the respective duties of both parties can be stated in advance (contracting means to implement incentives mechanisms and check how to constrain parties’ behaviour).

- “Relational”: the parties commit mutually to co-operate ex-post (after the signature of the contract) and design governance mechanisms for that purpose. Here contracting means to implement bilateral negotiation mechanisms and to guarantee in the long run the dynamics of co-operation.

The choice of the contract type must be adapted to contrasted co-ordination contexts which depends on 4 dimensions:

- The respective expertise of both parties.

- The complexity of the policy domain, meaning that information is revealed only through policy implementation.

- The degree of vertical interdependency between national and regional policies.

- Characteristics of the enforcement context that warrant commitments’ credibility (independent administrative justice, clear delimitation of responsibilities).

Source: OECD (2007), Linking Regions and Central Governments: Contracts for Regional Development

Because of the complexity of the policy domain, which involves many actors and issues, contracts on regional development are often of the “relational” type. For example, relational contracts may be preceded by calls for tenders to reduce uncertainty, elicit information about possibilities, and help develop selection criteria (Box 3.8). Relational contracts can also contain specific tasks to be handled by “transactional” contracts. Finally, mixes of both are seen as decentralisation takes place.

The OECD findings on the efficiency of contracts for regional development policy, based on theory and case studies, are as follows:

- Explicit contracts among levels of government are unavoidable because of vertical interdependencies between issues and outcomes among levels of government, and because there may otherwise be either duplication of effort or policy gaps.
Contracts allow a customised management of interdependencies, useful in unitary states as an instrument in decentralisation policies. They are often broad in scope with multiple goals (framework contract complemented by a set of implementation contracts, see France, Italy). In federal states, contracts are just tools for allowing co-operation because interdependences between levels of government remain even if the distribution of prerogatives is very clear (Box 3.9).

Contracts are tools for dialogue, for experimenting and clarifying responsibilities and so for learning. Impact evaluation should be encouraged, so as to make use of the results in adjusting the policy.

Bilateral commitments validated by contracts among levels of government must be as verifiable as possible.

Collaboration through contracts makes the need for strategic leadership at regional and/or local level more obvious.

Contracts have also “drawbacks” related to:

- the possible high cost attached to consultation and negotiation steps as well as to their execution;
- their trend towards proliferation (see OECD (2006) *Territorial Review of France*);
- ministries in central government in charge can be reluctant to give up their prerogatives;
- limited flexibility when the parties are rigidly committed to fixed long-term programmes;
- possible tension between levels of government in the acknowledgment of the respective parties/responsibilities of the contract;
- difficulties in specifying regional strategy when national goals are too broadly defined.
Box 3.8. Call for tenders for regional innovation programmes: a tool for revealing information and producing learning before contracts

While a competitive selection process can contribute to the importance of a “label”, the number of projects selected must be limited. Programmes seeking to support leading regions or industries often impose a stricter selection process and fund fewer projects. The Norwegian Centres of Expertise specifically seeks to limit the number of selected clusters so that the label effect will be important enough to attract international attention. The Swedish VINNVÄXT programme in its first round selected only 3 full recipients and 7 partial recipients out of 150 initial applicants and selected 5 out of 23 in the second round. While France chose a very large number of poles, they developed a four-tier labelling system to distinguish between them: 6 were “international”, 9 were “internationally oriented”, 15 were “inter-regional” and 37 were “regional”.

The capability and credibility of the bodies that make selections play a role in public perception and hence in the effectiveness of the label. The involvement of private actors appears to be an important source of credibility. The Georgia Research Alliance in the United States, for example, serves as an expert body for selecting the most relevant research projects to support the state’s growth. While state legislators allocate the funding to the Georgia Research Alliance, its Board members are representatives from universities (many are private entities) and industry. Most countries have selection committees comprised of both public and private actors. In cases where the selection process is performed entirely by civil servants, the process is more subject to debate. In France, for example, the lack of private-sector involvement in the selection committee has been noted by the policy’s critics. However, France does have a committee to ensure the integrity of the pole label. In Sweden, the fact that the programme designation was national, and not simply regional, was considered in evaluations to play an important role in cluster legitimacy.

One additional benefit of competitive selection procedures is that sometimes, even for candidates that are not selected, the process results in network building and action plans. Sweden’s VINNVÄXT programme accepted only a small fraction of the applications received. When Sweden’s subsequent Visanu programme was introduced, many groups that had already worked together on a VINNVÄXT application applied to Visanu and were selected. Some networks have also worked together to re-apply for subsequent VINNVÄXT funding rounds. In Germany as well, unsuccessful applicants to the BioRegio and InnoRegio programmes have gone on to develop their projects on the basis of other funding mechanisms. The momentum generated by the BioRegio competition led to the expansion of support to biotechnology via the BioProfile programme to a larger number of regions, many of which had been unsuccessful applicants for BioRegio.

Box 3.9. The Vancouver Urban Development Agreement

Canadian contracts illustrate a clear assignment of responsibility in a federal state. They permit the management of independencies when several policy domains have to be combined among different levels of government. Contracts focus on objectives and duration. For example, the trilateral Urban Development Agreement between the Government of Canada (central level), the Government of British Colombia (regional level) and the City of Vancouver (municipal level), the Vancouver Agreement, (VA), which ran from 2000-2005, won national and international awards for innovative management and for improving transparency, accountability and responsiveness in the public service. The VA was conceived as a collaborative partnership aimed at moving away from traditional silo-based approaches toward a horizontal model of governance. Its initial focus was on the serious and varied problems of a somewhat notorious area of the city of Vancouver (the Downtown Eastside) which experienced deteriorating economic, social and health conditions in the 1990s. In response, all three levels of government agreed to the idea of an urban development agreement which would provide the framework for building a common understanding of the problems faced by government and with a view to better co-ordinating the efforts of a wide range of government departments and private actors agencies. The co-ordination context of the VA was extremely complex, due to the myriad and entrenched nature of the problems addressed and the wide variety of actors and agencies involved. Considerable asymmetries of both information and skills were at play. These elements made unilateral or centrally designed and controlled solutions impossible. The enforcement structure based both on individual partners’ existing authorisation procedures for committing required funds and accountability to each partner’s own electorates for their performance plus the settlement of three levels of supervision made commitments credible. The contractual “relational” solution of the VA was well adapted to the impossibility to know ex ante the precise goals of the co-operation, and the wish to engage in a long term collaboration and co-ordination process. As a governance mechanism the VA was successful and viewed positively by the participating governments who signed a second generation VA agreement in 2005. Moreover, at senior levels within the federal government there is continued interest in the efficiencies and benefits that tri-partite arrangements such as these can have in addressing complex issues requiring intervention by all three orders of government in Canada.

Source: OECD (2007) Linking Regions and Central Governments: Contracts for Regional Development, case study on Canada

The need for coordination across line ministries

From the national government perspective, there is a need to work with conflicting perspectives: specialisation in lean organisations which are efficient in the pursuit of their individual goals, while also encouraging clever integration to reach goals where operations intersect, in particular for regional purposes. The public sector has become a matrix of crossing perspectives, geographical as well as functional and the key issue rests on the ability to benefit from synergies between the different domains of public intervention. Vertical co-ordination often requires horizontal co-ordination between line ministries in charge of public policy fields, with an impact at the sub-national level.

This is the case with the Contrat de Plan Etat Région (CPER) in France (now Contrat de Projet Etat-Régions). In the previous generation of CPER (2000-06) there were nearly 20 ministries participating, all contributing to varying degrees. The ministries that contributed most to the regional programmes under these contracts were the Ministry of Infrastructure, Transportation and Housing, followed by the Ministry of Education and the Ministry of Agriculture. Co-ordination of the various ministries’ actions in regions is the responsibility of both the inter-ministerial role of the DIACT (Délégation Inter-ministerielle à l’Amenagement et la Competitivité du Territoire, under the authority of the Prime Ministry) and the “prefect” role of negotiator of the contract (the other party is the president of the regional council) who refers to the variety of ministries who are stakeholders of the contract (with the participation of their deconcentrated services in
regions). In some cases, like in Poland, this can be very challenging, with regard to the allocation of EU funds: the ministry of regional development is the managing authority for all operational programmes (including sectoral ones), but in practice conflict has occurred between ministries, and arbitration mechanisms are lacking. In Spain, coordination of the use and management of the EU Funds is the responsibility of the Ministry of Economy and Finance which: negotiates with the EU; coordinates with the regional Autonomous Communities and the other ministries and warrants the assessment of the EU funded projects.

In most countries, however, co-ordination on regional development policy at the central level is a challenging issue, and most countries lack strong central authorities in charge of arbitration among different line ministries (Box 3.10). The need for both vertical and horizontal co-ordination for addressing specific needs in terms of public investments and action is particularly clear in the case of dealing with the aftermath of hurricane Katrina in Louisiana – the presence of a greater number of stakeholders would have been desirable for a more collaborative approach (Figure 3.3).
Box 3.10. Co-ordination of regional policy at the central level: various models in OECD countries

In OECD countries there are several different models for improving the co-ordination of territorial policies at national level. The spectrum of instruments ranges from bodies charged with co-ordinating the activities of sectoral ministries to fully-fledged ministries with broad responsibilities and powers that encompass traditionally separate sectors (a specific ministry for regional development was created in the Czech Republic, Norway, Poland, and Slovak Republic, for example).

The simplest and most common instrument is co-ordination through inter-ministerial committees and commissions. Some co-ordinating structures are relatively informal, others are more structured. Austria, for example, has developed an informal approach that emphasises consensus building among ministries, while Switzerland uses a more formal approach in which ministries dealing with territorial development issues have to convene regularly in an inter-ministerial body.

Several countries augment cross-sectoral co-ordination mechanisms through special units or agencies that provide planning and advisory support to help ensure policy coherence across sectors. In Norway, the Regional Development Unit of the Ministry of Local Government and Regional Development has responsibility for co-ordinating the regional dimension of policies of other government departments, principally through inter-ministerial groups. In Japan, the National and Regional Planning Bureau in the Ministry of Land Infrastructure and Transport has developed a new view of territorial/regional policy and provided a network for local authorities as well as other local actors. In France, the DIACT (Délégation inter-ministérielle à l'aménagement et la compétitivité des territoires) is an inter-ministerial body directly linked to the office of the Prime Minister (which co-ordinates national territorial policy and handles planning contracts and the European structural funds) and receives information from the different ministries regarding their regional priorities and the strategic objectives identified by the regional prefects.

While co-ordinating bodies represent an important tool, decision-making power remains principally in the hands of the individual sectoral ministries that implement policies. As such, while the planning stage is more or less well integrated, implementation is potentially compartmentalised. To overcome problems relating to sectoral implementation, and in line with the increasing importance accorded to regional development policies, inter-ministerial co-ordination bodies have sometimes been given some responsibility for implementation. The DIACT in France is an example of an inter-ministerial body that is charged with ensuring co-ordination but also has a formal role in territorial development planning, decision making and policy implementation. The Office of the Deputy Prime Minister in the United Kingdom has also evolved towards a broader and more active role than its original policy co-ordination remit. In Italy, the Department for Development and Cohesion Policies in the Treasury Ministry has broad competence for programming and co-ordinating investments with particular reference to the Mezzogiorno region. In Portugal, the Ministry of Environment, Spatial Planning and Regional Development encompasses three transversal policies with natural territorial impact and co-ordinates many multi-level partnerships for investment with other line ministries, municipalities and firms.

A drastic change to national spatial planning was made in Japan in 2005, with the new National Spatial Planning Act that focuses on National Spatial Strategies. In this new system, Regional Plans for sub-national regions, based on the National Plan Strategies focus on long term development policy. They are jointly developed by regional branches of the central government and local governments. The Ministry of Land, Infrastructure, Transport and Tourism is in charge of this new planning system. It allows for a better integration of sectoral policies related to each region and improves the co-ordination between the national framework and local assets and potentials.

In addition, these co-ordination bodies also function as the interface with regional government in the area of economic development – allocating funding, setting the guidelines for drawing up regional strategies, advising on and authorising the strategies, and ensuring value for money.
Drabenstott (2005) makes the point that most of the spending by the federal government in the US which affects regional development is made for other purposes but nevertheless had important effects on regional development. “The federal government’s 180 economic development programs suggest a very diffuse economic development policy. No single department or agency oversees the entire effort. Simply put, federal economic development policy is a soup concocted by many chiefs.” (p.11) and regional offices also remain uncoordinated. (p. 98 Statskontoret, 2007:2). This situation shows how difficult it is for the public and for experts to get a grip on the situation, to assess effectiveness and to be able holding politicians accountable for spending.

Box 3.11. The use of contracts: key findings from OECD work

There are pros and cons of “contractual arrangements” which need to be adapted to each case. They are not just static tools for managing co-funded public policies, but above all they are a tool for dialogue. Dialogue is crucial for avoiding differences of ambition between regional authorities and central ones.

Since contracts allow for learning, they can even lead to an evolution from a contractual arrangement to devolution of a task.

A key issue needs to be further explored: contracting between levels of government requires the identification of who are the leaders (gatekeepers) of regional development.

Reaching coherence of regional policy making through vertical contracts requires improving co-ordination arrangements among ministries intervening in regional development, because of the multi-sectoral nature of the policy.

The positive impact of policies cannot unfold with a fragmented policy approach. Policies interact strongly and in a complementary way. Regional and local levels are the locus where these complementarities materialise in a stronger manner. Strategies for
regional development and the regional provision for public goods must then be envisaged in a systemic view.

**Achieving an efficient scale in the supply of local public goods and services**

Increasing decentralisation puts pressure on both national and local policy makers to find ways to achieve economic efficiency, high quality in the provision of local public goods, the capacity to build and programme a strategic vision at the relevant area perspective and the ability of sub-national actors to negotiate with peers and higher levels of government. While sub-national authorities tend to operate mostly on the basis of administrative boundaries, a co-ordinating role for central government can be seen in the Netherlands: when national priorities are involved, central government needs to bring together sub-national authorities in integrated regional programmes, at the functional rather than the administrative scale. Reforming sub-national public organisation is not straightforward, however. It is difficult to measure the importance of economies of scale and hence the optimal size of sub-national jurisdictions. Secondly, it is challenging to translate any scale or scope economies that arise via co-operation or amalgamation into better or cheaper public services. Merging sub-central governments and promoting their co-operation are among the most frequent approaches, and many methods have been tried.

**Economies of scale and evaluation of outcomes**

Territorial fragmentation can jeopardise the implementation of major investment projects that are supposed to encourage growth when each local authority can only define a partial strategy. OECD countries present very different structures on this subject. Besides, empirical studies on the cost of public services conducted in several countries show a U-shaped curve: the cost per habitant diminishes with the size of the population (economies of scale) until a so-called “optimal” level, beyond which the tendency reverses itself, essentially due to congestion effects. However, this size varies considerably from one country to the next, mostly because of the differences in the distribution of competencies, and over time because of technical progress or new regulation (for example in the area of environment). Studies on the optimal size of municipalities were conducted recently in several countries, with sometimes different methodologies, but with mostly very heterogeneous results. The sizes are as follows: 150 000 inhabitants in Japan, between 10 000 to 50 000 in Canada, from 20 000 to 40 000 in Denmark, between 10 000 and 20 000 in Switzerland, around 10 000 in Norway, against around 5 000 in Spain.

**Trade-off between competition and cooperation**

A key issue in the governance of regional development is the trade-off between competition and co-ordination between local units. One of the seminal articles on local government (Tiebout 1956) postulates that the competition between local governments is the public sector’s equivalent to competition in markets: individuals “vote with their feet” to local units that offer their preferred bundle of public goods and taxes. Additions to this model include yardstick competition between regions (Salmon 1987). The traditional arguments for local government (better adaptation to local preferences and circumstances) underpin the positive impacts of competition between local governments. At the same time it is clear that competition is more complex in the case of externalities,
as these effects beyond jurisdictional borders risk being ignored if there is not some form of co-ordination or co-operation. In general, there will be more need for regional co-ordination of public goods and services when these are subject to externalities (such as transport); more competition would make sense when most externalities are already internalised or when mechanisms are in place to internalise. This is particularly relevant for metropolitan areas as their density will usually imply more externalities. For this reason, several municipal areas have intra-metropolitan equalisations schemes (Box 3.12).

Box 3.12. Metropolitan fiscal equalisation in Tokyo, Seoul, Istanbul and Copenhagen

Tokyo comprises 23 special wards, or tokubetsuka, with substantial fiscal and administrative powers and 39 municipalities. The current equalisation totals JPY 1.48 trillion (about EUR 11 billion) in 2003. It is funded by the sub-national property tax, the corporate share of the municipal resident’s tax and the landholding tax levied inside the Tokyo metropolitan region. Tokyo prefecture gets 48% of the funds, allocated to support its provision of area-wide services such as water and sewage, fire services, and the like. The remaining 52% of the funds are allocated among the 23 wards (ku) according to need. This need is determined by calculating 14 items of the ward level revenues and comparing the total for each ward with a calculation of standardised costs for each ward.

Seoul’s Metropolitan Government support to the autonomous districts (gu) totals KRW 2 000 billion (around EUR 1.7 billion), 14% of its total spending. The grants are adjusted according to local fiscal capacity. The formula for this transfer system has not been revised in over a decade and is heavily weighted towards covering the costs of civil servants. The district budgets are spent mostly on social development and relatively little in the economic development sphere.

The financial flows in the metropolitan fiscal scheme in Istanbul are the inverse of those in Tokyo and Seoul. District municipalities in Istanbul have to transfer 35% of their tax share to Istanbul metropolitan municipality to finance services that the metropolitan municipality is providing to the district municipalities. Of the remaining 65%, 10% has to be transferred to the Istanbul metropolitan municipality for transport investments. District municipalities complain about this transfer, since they feel that the services provided by the metropolitan municipality are poor and that they do not have enough left for their own needs.

There is an inter-municipal equalisation system in the Greater Copenhagen area. This is purely inter-municipal: no central government subsidies are allotted. A municipality in the area whose expenditures is larger than the estimated tax receipts receives a subsidy which is 27% of the difference between the expenditures and the tax receipts. Conversely, a municipality with a surplus contributes 27% to the equalisation scheme. The expenditure estimations are based on demographic ones and socio-economic factors, which makes it possible to take the different exogenous factors that influence local expenditures into account. The weights of the different socio-economic indexes are however different. The equalisation system for the Greater Copenhagen area transfers EUR 250 million per year from the less to the more needy municipalities within the metropolitan area of Copenhagen. Eighteen municipalities benefited from these transfers in 2008 and 16 municipalities contributed into this system. In absolute terms the largest beneficiary of the scheme was the City of Copenhagen which received around a third of the total money transferred.


Horizontal collaboration: amalgamation or cooperation?

Efficiency gains can be achieved in theory at the local level through amalgamation of municipalities which internalises spillover effects among them, produces economies of
scale, and improves fiscal efficiency, depending on the geographical extent of the relevant jurisdiction. With respect to economies of scale, it is assumed that a bigger municipality can enjoy them by merging public services and increasing the size of “plants” (schools, hospitals, etc.). Regarding fiscal aspects, a unitary tax system and uniform tax rates allow greater fiscal equity within the amalgamated agglomeration, and amalgamation allows better policy co-ordination across the territory. Indeed, with fewer jurisdictions, firms may be less able to play off one jurisdiction against the others. The main argument against amalgamation is that, given the difficulties associated with merging (see below), the gains in efficiency could be achieved instead through inter-municipal co-operation.

Co-operation can translate into economies of scale at the “plant” level, as municipalities combine resources to provide public services jointly (such as a regional school district). Municipalities may agree to a common tax rate (as in France), pool revenues through an inter-municipal structure, and redistribute the funds to enhance equity across the region. Inter-municipal co-operation can also permit localities to access new funds, to generate a local strategic vision, or to specialise in specific services and co-operate to access others.

Policies regarding municipal coordination

Most OECD countries are concerned by the question of a relevant scale for local public services. A first approach consists of recentralising certain responsibilities at a higher governmental level that displays economies of scale (this is the case in particular for hospitals: in Norway since 2002; in Australia where reform is scheduled to be finished by 2010; in Finland where municipalities have to be partners of their hospitals managed at regional level). Solutions can also be applied by the co-operation between municipalities according to different formats: specialisation (notably in Switzerland) or joint production. In Switzerland, certain cantons do not provide certain public services (notably hospital care and university education) but they guarantee their citizens access to these services via other cantons (against a financial compensation). However, most countries have privileged the other type of co-operation - joint production - which can be limited to just one service or cover several of them (Germany and Spain for example). Finally, certain OECD countries, in a more radical approach, adopt the strategy of merging municipalities. It is interesting to note that these mergers contribute more to improving the quality of service than to reducing the costs. This merger strategy has been put in place in many OECD countries, recently in Japan and in Denmark (Box 3.1). They sometimes target a precise size and contain incentive measures that are more or less voluntary. In contrast, in France, inter-communal grants are considered as an opportunity for municipalities, and not associated with strictly evaluated constraints, therefore creating a real disincentive to the merger of municipalities. While inter-municipal co-operation is not a specifically rural or a specifically urban phenomenon, the distinction is significant. Densely populated urban areas or regions where there are many municipalities which are close to big cities, present different issues and opportunities for co-ordination than sparsely populated rural areas.
Box 3.13. Examples of mergers policies: the case of Denmark and Japan

Denmark

On January 1, 2007, after a 4-year reform process, the number of Danish municipalities was reduced from 270 to 98, with an average size of 56,000 inhabitants. After a series of public hearings and discussions in the second half of 2004, all Danish municipalities were asked to select the neighbouring municipalities with which they wanted to merge. The threshold size for the new municipalities was set at 20,000 inhabitants. The deadline for selecting partner municipalities was 1 January 2005, two years prior to the actual mergers. Thirty-two municipalities (located largely around Copenhagen) remain the same as in the past because their total inhabitants exceeded 20,000 and so they were not obliged to merge. Between mid-2004 and the end of the year, municipalities negotiated with potential partner municipalities and citizens were given the opportunity to articulate their preference through a series of local referenda. Municipal amalgamations were voluntary in the sense that the municipalities were able to choose their partners. The central government had the possibility to intervene in cases where voluntary agreements could not be reached. Ultimately, however, the central government intervened in only two cases. The primary goal of the merger process has been to improve the quality of the municipal services by transferring new responsibilities from county level to municipalities and, by increasing their size, to ensure that they can assume these new responsibilities, which include environmental control, adult education and specialised social services. Municipalities will also transfer responsibilities for assessing and administering taxes to the national level. Efficiency concerns were also among the reasons that municipalities were merged. It assumed, for example, that the new municipalities will benefit from economies of scale. However, this consideration was generally secondary to the larger concern regarding the quality of service provision.

Japan

Japan is a unitary country with a two-tiered sub-national system comprising 47 prefectures and 1,795 municipalities as of March 2008. The country has experienced three periods of major municipal mergers since the late 19th century. During the Meiji area the number of municipalities dropped from 71,314 in 1889 to 15,859 by the following year. In the 1950s, during the Showa era, mergers reduced the number from 9,868 to 3,472 municipalities. Finally, during the Heisei era the number of local entities dropped again from 3,232 in 1999 to 1,820 in 2006. The primary motivations for the recent round of mergers, where to: 1) promote further decentralisation, 2) address demographic shifts and, in particular, the ageing population, 3) to encourage mobility, and 4) to address serious fiscal constraints at the central and sub-central levels. The total long-term debt of both central and sub-central government totalled approximately JPY 775 trillion (approximately USD 7 trillion, or 180% of GDP, by far the highest ratio among OECD countries), with the portion held by local government expected to exceed JPY 204 trillion at the end of 2006. Municipal mergers are seen as a way to enhance the efficiency of local government.

While the Japanese government did not target an optimal size as part of the merger process, it did set a target of 1,000 municipalities. Local governments were encouraged to merge prior to 31 March 2005 (the expiration of the Special Merger Law), when localities would no longer be eligible for national subsidies for amalgamation. Currently, based on the New Special Merger Law of 2005, some incentives will still be given to the merged municipalities until the end of March of 2010, to further promote municipal mergers.

Japan encountered a variety of challenges during the last merger period. The four major problems represented the concerns of communities about the following: the naming of the new municipality, deciding whether to absorb or be absorbed by a municipality, determining the location of the new city hall, and setting the merger date. These problems often led to suspicion of the mergers and municipalities among citizens, mayors and councillors. As such, explaining the context, justifications, and benefits of mergers was important.

With respect to efficiency gains due to amalgamation, one study optimistically estimates an overall reduction in expenditures of JPY 1.8 trillion (USD 16 billion) after 2016. Savings would come from reduction in personnel costs and investment savings. However, short-term expenditures are expected to rise for the next 10 years, due to the costs of integration in areas such as information systems and infrastructure development.

Co-ordination of municipalities in urban areas

In large urban areas, amalgamations are often promoted on the grounds that a bigger municipal government would improve the effectiveness of public services delivery and thus increase the competitiveness of the metropolitan region. With amalgamation, higher-level of governments try to off-load certain responsibilities and limited powers to the municipal level. Another objective is to rebalance population growth and patterns of social structure within metropolitan regions. In many cases, amalgamation was implemented as a response to urbanisation and urban sprawl by annexing small jurisdictions to a large municipality. This was done in Korea when metropolitan regional tiers were created in 1995, in Istanbul in 2004 with the 2004 legislative law that extends the administrative boundaries to fit the provincial level, as well as in Madrid during the 1940-1950s and Melbourne at the end of the 1990s. These arguments have also been advanced by provincial policy makers in Canada which led to mergers in large metropolitan areas in Halifax in 1996, Toronto in 1998, and Montreal in 2002 (OECD, 2004a and OECD, 2002).

Co-ordination of municipalities in rural areas

In contrast to high-density metropolitan areas, rural areas across OECD countries often suffer from problems that derive from their low-density character, which makes it difficult to provide public goods and to exploit economic potential. A problem frequently encountered in sparsely populated rural areas is that administrative boundaries, existing fiscal schemes for transfers to local governments, and legal instruments often do not correspond to the functional boundaries that may contain the necessary elements to attain a sufficient level of resources to support self-sustaining growth. In this context, small municipal authorities often turn to collaboration to attain a more efficient size for the provision of public services. Moreover, as administrative boundaries do not necessarily coincide with areas that are relevant economically, municipalities can co-operate with the aim of playing a more effective role in local economic development through exchanging information, sharing responsibility for certain investments and programmes and dealing with territorial externalities. This approach to emphasizing the potential links via increased local co-operation runs contrary to the traditional focus on mechanisms that compensate for comparative disadvantages of lagging rural regions.

Pooling resources and achieving economies of scale require an adequate spatial organisation that adapted to a small functional region, usually organised around one, maybe two, small to medium sized towns. However, the size of natural areas of development or functional areas can be quite variable from one small rural area to another, depending on its geographic environment, natural resources and amenities, population density, skills and infrastructure. In Canada, the Community Futures Corporations set up to foster innovative development programmes with the support of the federal and provincial governments cover territories much greater in size than their European counterparts. By contrast, the Pays, or rural regions, in France vary in population range by a factor of one to five, but most consist of less than 30 000 inhabitants. In practice, the spatial characteristics of these groupings vary widely across OECD countries.

In linking rural municipalities together, the main town often acts as a public and private service centre for the whole area (social services, sometimes a hospital, banks) while representing a sizeable portion of employment. In optimal situations, this hub is adequately linked to the domestic transportation network. The Irish Spatial Strategy
retains these rural hubs as major elements in efforts to foster the development of rural areas and links these, in terms of infrastructure development to “Gateway” cities at the regional level, to which the former need to be properly connected. In France, the delimitation of a Pays follows a certain number of guidelines to ensure that the small territory responds to a degree of economic logic linked in particular to employment. In Mexico, rural micro-regions are defined through a top-down approach based on socioeconomic indicators combined with other spatial indicators through the use of Geographic Information Systems (GIS).

In general, evidence shows that the most extreme form of coming together (merger) only makes sense where the zones or municipalities are very close to each other geographically. What may be considered appropriate policy for urban areas may not help much in dispersed rural communities where the delivery of public services is an important tool used for regional development objectives (e.g. Norway). The case of the Canadian Province of Quebec also illustrates the importance of developing differentiated policies for urban and rural areas. In the course of its municipal reform, from 1999 to 2002, the provincial government was highly aware of the fact that heavily urbanised areas, rural areas and mixed urban/rural areas each required their own special strategy. So the preference went to consolidating municipalities in urban and metropolitan areas, strengthening the intermediate regional structure in rural areas, and stepping up inter-municipal co-operation in mixed rural/urban areas. This differentiating strategy aims to take into account the fact that these three types of municipal environments have different skills and use these skills in different ways.

Cross-border cooperation across regional authorities

Interest in mechanisms for managing cross-border regions is the result of two distinct international trends: first, supra-national integration is reducing trade barriers between countries, and second, decentralisation is putting more power into the hands of sub-national governments. Both trends increase the feasibility and potential benefits of collaboration across the border. Cross-border regions typically suffer from fragmentation of markets, of the labour force and of institutions. Often, border regions feel the friction created by diverging fiscal or labour market regulations and some try to circumvent this friction through intensified cross-border co-operation. The establishment of joint planning committees would mean greater integration of institutions and unified development plans. Integration of physical infrastructure would result in, for example, the reduction of travelling times between centres on different sides of the border and completion of “missing links” in the infrastructure system. The creation of a functioning cross-border region where these weaknesses are addressed and complementarities are maximised promises significant benefits for the participating regions but remains a difficult challenge.

Indeed, while the concept is clear, and many elements that would constitute a cross-border integration strategy are obvious, the practicalities of formulating and managing a coherent strategy are not. Cross-border governance can be defined as the establishment of and adherence to a set of incentives, norms and organisations that are set up to co-ordinate policy making in a region where the functional area of economic activities does not coincide with the geographical pattern of political jurisdictions. The mismatch between catchment areas and political jurisdictions leads to negative externalities and financial imbalances and can complicate coherent planning for region-wide infrastructures and network industries. The issue for policymakers is to find governance
mechanisms, *i.e.* tools and incentives, that enable policy coherence in spatially and economically homogenous but politically fragmented areas. Because the interest in building a cross-border integrated region is not only a local issue, non-local actors are strongly involved and their interests are reflected in the formulation of policies and institutions to encourage cross border exchanges. The interest “matrix” is vertical as well as horizontal, national (even supra-national) as well as local, both public sector and private.

While cross-border regional cooperation is strongly supported by the EU and is considered as a bottom-up tool for reinforcing integration across EU members, specific programmes have not automatically resulted in the establishment of new public-private alliances to address regional and local development issues. At its most successful, collaboration has worked mainly where public agencies have been strongly involved and had a direct say in project definition and implementation. This differs from the pattern of North America where governance structures tend to be more flexible, more oriented towards a few purposes, better able to react to specific problem situations and more driven by the private sector and local governments, confirming that cross border co-operation has a very pragmatic appeal in North-America (see a variety of examples in OECD, 2005).
Box 3.14. Improving public service through merging administrative units: findings from OECD comparisons

Neither academic research nor evaluations made by public or para-public bodies have shown strong consistent evidence that merging municipalities leads to economies of scale. Thus, the promotion of co-ordination through mergers or co-operation cannot be justified purely on the basis of economies of scale. Economic gains require time-consuming changes in work processes and municipal organisation, and spending rises in the short-term for investment decisions that were not possible before pooling funds. Instead, issues such as standardisation of services, strategic alliances for development, financial constraints, community life and equity should be considered.

- Since the efficiency case for amalgamations and co-operation is weak, other aspects must be taken into account. In particular, there can be a “democracy cost” if mergers or co-operative arrangements shift power away from locally elected officials to civil servants or elected officials of other municipalities.

- In addition, merging competitive municipalities may lead to the loss of benefits previously associated with competition. Co-operation could lead to awkward situations, as when municipalities collaborate in some public service areas but remain competitors in terms of territorial attractiveness. There could also be a loss of flexibility and responsiveness to changing conditions, as small municipalities may have an advantage in this regard over large municipalities.

- Whether governments choose mergers or co-operation, arrangements need to be structured to take account of potentially perverse incentives. As gains from co-operation and amalgamation appear to be positively associated with organisational restructuring (e.g. reductions in administration), policy makers should identify mechanisms to minimise the “lock-in effect” of civil servants. Without commitment to restructuring, there is no incentive to re-organise the number of civil servants, which can prove costly over the long-run. Other perverse incentives include opportunistic and superficial co-operative arrangements which serve largely to attract central government funding, but do not function to maximise efficiency or quality of local government services.

- Despite difficulties in implementing and governing it, the specific case of cross-border co-operation between regions has to be underlined as a potential effective tool for addressing global challenges like environmental or large infrastructure projects for facing climate change or the crisis.

Evaluation, performance indicators systems and incentive - building capacities at the sub-national level

Sub-national capacities for regional development policies

As a basic definition, sub-national capacity relates to the aptitude of sub-national authorities to fulfil their mandate, including both “official tasks” (associated with the function of this body) and “political commitments” (associated with the variety of promises made during electoral campaigns). These are different tasks and require different types of skills and experience. A good political leader might not be a gifted administrator, but is accountable for the promises made during an electoral campaign. At
the same time, regional development strategies have to remain respected (with adjustments due to specific evolutions of the context) even if the political time is a discontinuous one. This objective might be specifically challenging for countries where local elected officials cannot be re-elected (Mexico). It has also been observed that local public investment is clearly influenced by political timing (it increases just before and just after an election - in Belgium for example). Sub-national capacity will depend on local officials’ qualifications and organisational aptitudes, and their ability to evaluate results, interact with private and public stakeholders and contribute to the design and implementation of strategic vision for the territory. CIDE from Mexico has provided an index of “institutional competence” which refers to the governmental, legal and regulatory features under which socio-economic interactions take place in the cities (Cabrero, et al., 2003). Significant risks arise from interaction with local businesses, of costly renegotiation and of capture (Box 3.15). One possible solution is a greater participatory approach, including citizens in the policy-making process, as well as institutionalisation of “civil society” representatives, through specific bodies (e.g. the Conseils économiques et sociaux – régionaux et nationaux - in France). Strong external financial controllers are also desirable.

Box 3.15. Capacity for interacting with private businesses for long term investment and strategies

Because of risk of “capture”, public authorities at the sub-national level must develop capacity in terms of long-term contract negotiation, and the ability to address risky commitment and investment. These capacities need time to be built and “learning by doing” might be very costly (for the IMF, renegotiations of contracts are especially frequent when sub-national capacity is missing. About half of all PPPs get renegotiated in Latin America, for example. Paulo Medas-IMF presentation to the OECD Global Forum on Governance, Rio de Janeiro, Oct. 2007).

Interactions with private operators can also help define the appropriate strategy for long term development. In such cases, sub-national governments are confronted with a trade-off between gaining in knowledge for regional strategy thanks to dialogue with local firms and being lobbied or even captured for engaging in projects which are more future public markets for the private selected firms having participated in phases of “definition of strategy”; than development project for the whole area (OECD 2007, Yucatan infrastructure Council, Yucatan). Addressing this risk needs specific abilities for anticipation of long term results of short term decisions as well as a clear view of citizens and local companies interests when negotiating with possible external investors (see various examples of favours allocated to foreign investment in terms of taxes and regulation, without any possibility to enforce a contract with those companies about the respect of “long term presence” clauses).
Performance indicators systems

The evaluation of the impact of regional development policies on regional economic outcomes, on reduction of regional disparities and competitiveness, which would be crucial for linking causes and effects and attributing changes in outcomes to programmes activities, remains limited in practice. Because of this, many countries have adopted indicators systems for assessing performance, especially of the sub-national ones (Table 3.3).

Indicator systems contribute to a common frame of reference for dialogue about regional policy. Indicator systems also promote learning and orient stakeholders towards results. When carefully coupled with specific incentive mechanisms and realistic targets, these indicators can stimulate and focus actors’ efforts in critical areas. They thus help promote capacity development and good management practices. In addition they are effective tools for reinforcing accountability of stakeholders at all levels of government by improving transparency. Assessing a variety of such performance indicators systems (Box 3.16) has led to a better identification of benefits and “costs” attached to their implementation.
### Table 3.3. Examples of indicators used by different OECD countries to measure sub-national service

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
<th>Country/system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>• Population, gender, age, marital status, births, deaths</td>
<td></td>
</tr>
<tr>
<td>Service context</td>
<td>• Irregularities in water distribution</td>
<td>Italy (regional policy)</td>
</tr>
<tr>
<td></td>
<td>• Per capita average expenses for theatre and concerts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Air pollution due to transportation</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td>• Municipal nursing home beds</td>
<td>Finland</td>
</tr>
<tr>
<td>Staff</td>
<td>• Number of required staff for the service</td>
<td>Turkey/BEPER</td>
</tr>
<tr>
<td></td>
<td>• Numbers and qualifications of teachers</td>
<td>Finland</td>
</tr>
<tr>
<td>Finances</td>
<td>• Net operating expenditures</td>
<td>Norway/KOSTRA</td>
</tr>
<tr>
<td></td>
<td>• Education expenditures</td>
<td>Finland</td>
</tr>
<tr>
<td></td>
<td>• Deflated expenditures and revenues</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Policy effort</td>
<td>• Capital expenditure by level of government and sector</td>
<td>Italy (regional policy)</td>
</tr>
<tr>
<td></td>
<td>• Preparation and approval of territorial and landscape programming documents</td>
<td></td>
</tr>
<tr>
<td>Policy outputs</td>
<td>• Number of inhabitants served</td>
<td>Turkey / BEPER</td>
</tr>
<tr>
<td></td>
<td>• Amount of solid waste collected</td>
<td>Finland</td>
</tr>
<tr>
<td></td>
<td>• Visits to physician, dental care visits</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>• Building permits issued</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Service coverage</td>
<td>• Percent of aged inhabitants receiving home services</td>
<td>Norway/KOSTRA</td>
</tr>
<tr>
<td></td>
<td>• Percent of children enrolled in kindergarten</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recipients of social services as percent of the population</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>• Government funding per unit of output delivered</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>• Spending efficiency: achievement of payment level equal to 100% of previous year's financial appropriation</td>
<td>Italy (regional policy)</td>
</tr>
<tr>
<td></td>
<td>• Children 1-5 years in kindergartens per full time equivalent</td>
<td>Norway/KOSTRA</td>
</tr>
<tr>
<td></td>
<td>• Number of children per teacher</td>
<td>Sweden (education)</td>
</tr>
<tr>
<td></td>
<td>• Cost per user</td>
<td>Sweden (elder care)</td>
</tr>
<tr>
<td>Policy outcomes</td>
<td>• Education transition rates</td>
<td>Norway/KOSTRA</td>
</tr>
<tr>
<td></td>
<td>• Response times to structure fires</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>• Improved language skills of immigrants</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>• Effectiveness of outputs according to characteristics important for the service (e.g. timeliness, affordability)</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>• Disease-specific cost-effectiveness measures</td>
<td>Finland (hospitals)</td>
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<tr>
<td></td>
<td>• Passengers</td>
<td>Netherlands (transport)</td>
</tr>
<tr>
<td></td>
<td>• Share of completion of students in secondary schools</td>
<td>Sweden (education)</td>
</tr>
<tr>
<td>Equity</td>
<td>• Geographic variation in the use of services</td>
<td>Finland (hospitals)</td>
</tr>
<tr>
<td></td>
<td>• Units per 1,000 members of target group</td>
<td>Germany (Berlin)</td>
</tr>
<tr>
<td></td>
<td>• Recipients of home based care as a of share inhabitants in different age groups</td>
<td>Norway/KOSTRA</td>
</tr>
<tr>
<td>Quality</td>
<td>• Number of days taken to provide an individual with needed assistance</td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td>• Number of different care-givers providing home care for the elderly to a single individual</td>
<td>Denmark</td>
</tr>
<tr>
<td>Public opinion</td>
<td>• User satisfaction with local services</td>
<td>Netherlands</td>
</tr>
</tbody>
</table>

Box 3.16. Examples of performance indicators systems and incentives

The European Union (EU) Structural Funds: This case examines mechanisms for monitoring the performance of EU Structural Funds during the 2000-06 programming period, with a specific focus on the "performance reserve". The reserve was an inventive mechanism to encourage performance improvement by attaching explicit financial incentives to indicators and targets. It was implemented in a larger context of monitoring and evaluation activities by the EU that included a mid-term evaluation process and a decommitment (N+2) rule. The reserve set aside 4% of a programme’s total budget and distributed it only if some specific objectives were achieved. In consultation with the European Commission, member states selected their own indicators, chose their own approach to assessment, and used the mechanism differently. The case study reveals the political and technical challenges of implementing such a system, while also highlighting the learning effects which took place. Although the mechanism is no longer compulsory, it helped to raise awareness of the importance of monitoring and evaluation, as well as the need to improve monitoring systems and capacities. It was a learning experience at both the EU and national levels in terms of designing systems, selecting indicators, achieving targets, and using explicit financial incentives.

The Italian national performance reserve: Italy is a unique national example of the use of explicit incentives to improve the performance of regional development policy. During the 2000-06 programming period for the EU Structural Funds, Italy extended and reinforced the logic of the EU performance reserve by adopting a national performance reserve aimed at promoting the modernisation of public administration. This reserve, which set aside 6% of the programme’s budget, was developed collaboratively between the central government and regional actors. Specific arrangements were made to ensure transparency and enforcement of the approach. The extent to which the results of the national performance reserve translated into improved regional economic performance is unclear. However, Italy was sufficiently satisfied with the results that it has since developed a new incentive mechanism that moves beyond process and output targets, and focuses on rewarding achievement of outcomes.

The monitoring system for England’s Regional Development Agencies (RDAs): The case of England highlights the dynamic nature of performance indicator systems. Since being established in 1998, the English RDAs have been subject to a number of different approaches to monitoring. With each change, the national government has aimed to enhance the quality of the monitoring process. Over time, the system has become increasingly flexible and accommodated feedback from the RDAs themselves. The most recent shift has been to allow RDAs to decide how best to measure their progress towards overall regional policy targets. Under this new approach, outputs are expected to demonstrate short term results and form the basis for impact information gained through evaluation.

The monitoring system for the US Economic Development Administration (EDA): The case of the US EDA demonstrates the importance of using indicators to generate information that can be used for decision making on both a short- and a long-term basis. As a national agency, the EDA is subject to the US Government Performance and Results Act, which requires all federal agencies to report to Congress regarding the achievement of specific goals. As the results of EDA investments often materialise over a number of years, the Administration projects and reports on indicators which track outcomes three, six and nine years after programme investments have been made. However, these and other data produced for GPRA have limited use for short to medium term decision making. To meet their strategic information needs, the EDA couples reporting to Congress with the use of an internal Balanced Scorecard to monitor short term progress.


Performance indicators produce benefits but have limited feedback effect on decision making. Their main impact is their ability to reinforce linkages among regional development policy stakeholders (at different levels of government) and their contribution to learning and capacity building (Box 3.17).
Box 3.17. Performance indicators systems advantages

Indicators systems have a limited utility in selecting policy strategies and actors or determining resource allocation. But in all cases evidence shows that indicator systems are useful mechanisms for monitoring the implementation of policies and programmes. The EU case highlights the value of two key mechanisms for ensuring that programme implementation stays on track: the decommitment rule and the Mid-Term Review process. The former worked to ensure that funds were spent on time as committed, while the latter mechanism forced countries and programmes to take stock of progress and, indeed, led to some reprogramming. The case of the Italian national performance reserve shows that not only can indicators be used to monitor if outputs and outcomes are being produced, but also if the process of policy implementation is characterised by effective public administration. In the US, an internal monitoring tool – the Balanced Scorecard – is used to ensure that short and intermediate process objectives are achieved within the organisation in order to enhance the likelihood of positive programme performance. Finally, the UK case demonstrates continued efforts to monitor programme implementation (e.g. through outputs) in a manner linked to national policy goals.

Performance indicators systems also permit assessing progress and accounting for results. For example, public annual Performance and Accountability Reports summarise the performance of the EDA against specific targets; similarly publicly reported performance enhances the legitimacy of the English RDAs. The Mid-Term Review provided EU officials with indicators regarding the progress across multiple countries, while simultaneously requiring awareness at the national level. Certainly, both the EU and Italian performance reserves aimed to hold regional actors accountable for results. The case of Italy, however, proved somewhat more successful in doing so.

Despite the fact that using them is often initially perceived as a constraint, they help to improve relations among levels of government. The performance indicator systems reviewed also proved to be useful in improving relations between different levels of government and between stakeholders within the same level. For example, the two performance reserve mechanisms in place in Italy (EU and national systems) contributed to relations between the central government and the European Union, and to relations between the centre and the regions. The performance framework in England provided a basis for collaboration both across regional development agencies and with the central government departments. Interaction with sub-national actors is least intense in the US. However, the Balanced Scorecard revision process provides ongoing opportunities for regional offices to interact with headquarters staff on strategic performance issues.

Finally, and importantly, performance indicator systems triggered learning processes improving policy governance and the way to deliver public investment and services. While the EU performance reserve was introduced only as a voluntary tool in the 2007-13 programming period, during 2000-06 it did encourage learning within member countries. In France, for example, new attention was given to the value of monitoring and evaluation instruments per se, and also for the relationship between central and sub-central levels of government. At the supra-national level, knowledge was gained about the use of incentives to promote performance, the need to reduce complexity in system design, and the capacities of different actors to set realistic targets. In Italy, the national performance reserve proved highly useful for revealing information about sub-national capacities, the value of central/sub-central partnership, and the usefulness of indicators and incentives for promoting performance. The UK case clearly demonstrates that learning is an ongoing process. Multiple adjustments have been made to the performance framework for RDAs. The approach recently put in place will give new emphasis to the achievement of outcomes. In the US, the EDA continues to invest resources to examine the relationship between inputs and outputs in order to produce lagged indicators, particularly for public works investments.


When setting up or improving an existing performance indicators system, the following should be borne in mind:

- There is no “optimal” design for performance indicator systems in regional development policy.
- The implementation of a performance indicator system is an iterative process, as it is part of a larger dynamic of testing new approaches for measuring and promoting effective public service delivery, evolving as information about its usefulness is revealed.

- Incentives are inevitable with the use of indicator systems. The incentives emerge because reporting performance data is not neutral. The strength of incentives depends on how information will be used and by whom. Attaching explicit rewards (or sanctions) to performance data can be a powerful way to encourage effort and improvement, however an explicit monetary incentive is not a sufficient condition for success. Causal linkages between actions and results might be very difficult to identify, which could create distortions in the implementation of explicit incentives.

- Partnership between central and sub-central levels of government is crucial, if the objective of monitoring is not just to control, but to build co-operation and promote learning. Rewards and sanctions are more likely to create the intended incentive effects if there is strong *ex ante* commitment from all levels of government to rigorous assessment of performance.

- Regional development policy produces outcomes that materialise over an extended period of time. The case studies reveal a move towards outcome measures (in Italy and in the English RDAs). However, orienting an indicator system solely toward these outcomes can reduce the flow of information that is needed for strategic short and medium term decision making. Thus, indicator systems should always provide information on inputs, processes, and outputs that are relevant for ongoing activities.

- It is clear that tracking developments in regional development policy is difficult. Capacity is needed for fulfilling indicators systems requests as well as for using them for improving public action. *So, while these systems can support capacity building, they also require initial competences for being able to use them.* The characteristics of regional policy, the capacities of stakeholders, issues of data availability, and the “costs” associated with developing and using indicator systems can complicate the task of effective monitoring. These considerations should temper expectations and be addressed by setting aside resources for developing and managing indicator systems, as well as technical assistance and training where needed.
Box 3.18. Evaluating and strengthening local capacity: summary of key findings

Strategies for building local capacities are complex and mainly based on co-operative approaches, iterative processes, and incentive mechanisms.

The use of performance indicators is especially relevant in this perspective. Regarding incentives (implicit or explicit) attached to evaluation, a key element must be underlined; the need for “neutral” evaluators in order to build trusting relationships instead of possible bargaining and influencing games.

To what extent can central governments (or supra-national ones) be both evaluator and grantors? One could say that since the higher level of government is in charge of guiding and warranting the coherence of the various regional approaches, it has to play a role in influencing the orientation and implementation of regional development strategies. However, such an approach could be detrimental for the neutrality of performance evaluation. Possible solutions are either “independent” bodies (or considered as such, like the French Cour des comptes) or Commission of stakeholders (like the Australian board for allocation equalisation funds among regions).

Conclusion

There is no “one fits all” multi-level governance structure to ensure policy coherence (both in terms of decentralisation structure and in terms of arrangements between line ministries and levels of government). As a result policy reform can take different forms. In general terms, six dimensions could be recommended in order to help improve coherence:

- **Policy framework**: A clearly-articulated policy message that 1) identifies one or more key policy goals 2) promotes a common understanding of regional policy 3) sets the parameters for actions and evaluation and 4) is supported by political commitment; with strong coordination mechanisms among line ministries to address regional development issues.

- **Roles, decisions, and information**: Roles and responsibilities among capable actors that are clearly allocated, clear leadership at the regional level, a gate keeper role for multi-level collaborative arrangements, decision-making assignments and methods that are clear and transparent, information flows that are shared and unimpeded, and a mechanism for co-operation among actors.

- **Planning and implementation**: Planning processes that are participatory, policy actions that are aligned with regional policy goals, mutually reinforcing, inter-sectoral, and co-ordinated among levels of government and key stakeholders.

- **Time frame**: Short and medium term policy actions that are framed by a strategic long-term vision that extends beyond the diagnosis of immediate problems and towards a future agreed upon by stakeholders.

- **Finances**: Financial flows that match policy priorities, provide sufficient levels of funding to achieve objectives, and promote co-operation and credible commitments: unified, co-financed and multi-year funding for regional policy.

- **Evaluation**: The infrastructure for and implementation of ongoing monitoring and evaluation in order to assess and adjust policies and programmes.