TDPC Meeting at Ministerial Level (30-31 March 2009)

Background Report

3-4 December 2008

This draft background report is submitted to delegates of the TDPC for DISCUSSION at its 20th Session.

It will then be revised and discussed by selected opinion makers at a workshop on 15 January 2009 in Washington D.C.

Finally at the Enlarged Bureau on 6 February 2009, a final version of the report will be discussed.

The final report, incorporating comments from all three meetings, will be the background report at the TDPC meeting at Ministerial level on 30-31 March 2009.

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TABLE OF CONTENTS

INTRODUCTION .......................................................................................................................................... 5
Regional competitive advantage in a global economy ............................................................. 5
The policy challenge .................................................................................................................. 6
Towards a more effective policy framework ........................................................................... 7

CHAPTER 1. EXPLORING REGIONAL COMPETITIVE ADVANTAGE: PATTERNS OF REGIONAL
GROWTH IN OECD COUNTRIES .............................................................................................................. 9
Introduction and main points ........................................................................................................ 10
OECD countries have not succeeded in reducing income disparities across regions ................... 10
Poorer regions have weak labour markets and are more vulnerable to unemployment .......... 16
Economic performance in regions is driven by the presence or absence of agglomeration economies ... 18
Does increasing concentration ensure continued economic growth? ................................................ 23
Explaining patterns of regional growth ....................................................................................... 31
What does this mean for regional policy? ..................................................................................... 35
Clarifying the objectives of regional policy and links with analytical results ................................ 35
Growth enhancing infrastructure and public goods (the capital dimension of regional policies) ......... 37
Human capital formation and strengthening labour markets: the labour dimension of regional policies .... 41
Making regions more innovative: the business environment dimension of regional policies .......... 42
Integrating specific urban and rural needs into regional policies .................................................. 44
Building competitive and sustainable urban areas ........................................................................ 44
Dynamic, diversified rural areas ..................................................................................................... 45

CHAPTER 2. EFFECTIVE PUBLIC INVESTMENT IN REGIONS: THE MULTI-LEVEL
GOVERNANCE CHALLENGE .................................................................................................................. 47
Introduction and main points ....................................................................................................... 47
Why is multi-level governance needed for effective regional development? ............................... 47
Differentiating regional strategies in a coherent way ................................................................. 50
Accountable leaders and the degree of decentralisation ............................................................... 52
A variety of frameworks regarding the institutional allocation of competencies ......................... 52
Financial resources and the variety of financial instruments for different objectives ................... 56
Sub national government (SCG) public spending ....................................................................... 56
Taxes vs. grants for sub national resources .................................................................................... 57
Types of grants .............................................................................................................................. 58
Financing equalisation is different from financing regional development ..................................... 61
The case of PPP for sub national investment ................................................................................ 63
Relevant strategies and dialogue between levels of government through contracts ....................... 64
Relevant scale for the supply of local public infrastructures, services and inter municipal coordination .... 73
Economies of scale and evaluation ............................................................................................. 73
Trade-off between competition and cooperation ........................................................................ 75
Forms of horizontal cooperation .................................................................................................. 76
Policies regarding municipal coordination .................................................................................... 76
Urban and rural considerations ..................................................................................................... 80
Evaluation, performance indicators systems and incentives... for building capacities at the sub national level... 83
Sub national capacities for regional development policies................................................................. 83
Sub national capacity building strategies .......................................................................................... 84
Performance indicators systems ...................................................................................................... 86
Conclusion ............................................................................................................................................. 91

Tables

Table 1.1. Ratios of per capita GDP by region, 2005 .............................................................................. 11
Table 1.2. National Growth Rates in Converging and Diverging Countries............................................. 16
Table 1.3. Annual average contribution the richest region, lagging regions, and regions above the national average in GDP per capita to national GDP, 1995-2005............................................................. 26
Table 2.1. Examples of indicators used by different OECD countries to measure sub national service .. 48
Table 2.2. Criteria for the allocation of competencies ............................................................................ 55
Table 2.3. Grant revenue by type of grant, 2004....................................................................................... 60
Table 2.4: Type of convenio with examples .......................................................................................... 68

Figures

Figure 1.1. GDP per capita differentials between OECD metro regions and their respective countries, 2005........................................................................................................................................................... 12
Figure 1.2. Unemployment rate differentials between OECD metro-regions and their respective countries, 2005 .............................................................................................................................................. 13
Figure 1.3. Employment rate differentials between OECD metro-regions and their respective countries, 2005.................................................................................................................................................. 14
Figure 1.4. Regional income disparities within OECD countries .......................................................... 15
Figure 1.5. Percent of national GDP in the top 10% of TL3 regions when ranked by GDP, 2005....... 18
Figure 1.6. Concentration of GDP and Population 2005, TL2 and TL3 Regions...................................... 20
Figure 1.7. Concentration of Agricultural, Manufacturing and Financial Activities in OECD Regions, Hirschman-Herfindahl Index of Industrial Concentration by TL2 Regions ................................................. 21
Figure 1.8. Concentration of Economic Activity by Sector and OECD Country, Measured by the Geographical Hirschman-Herfindahl Index ........................................................................................................... 22
Figure 1.9. Concentration of GDP and Patents 2005, TL2 Regions .......................................................... 23
Figure 1.10. Percentage yearly change in total population living in large urban TL3 regions and in the whole country; 1995 to 2005......................................................................................................................... 24
Figure 1.11. Initial GDP per capita and annual average growth rates in GDP per capita among 78 metro-regions, 1995 and 2005 ........................................................................................................................................ 25
Figure 1.12. Environmental costs from concentration: urban heat islands ............................................ 27
Figure 1.13. Transport infrastructure investment and economic growth effects.................................... 38

Boxes

Box 1.1. Examples of OECD countries that tried to monitor the growth of their largest metro-regions .. 29
Box 1.2. Evolution of urban policies in China: from anti-urban to the recognition of the role of large metropolitan areas .............................................................................................................................................. 30
Box 1.3. Explanation of the regional growth model using a cross-section approach............................ 31
Box 1.4. Summarising the results from related analysis ................................................................. 34
Box 1.5. Economic efficiency and the new economic geography .................................................... 36
Box 1.6. Impacts of the Öresund bridge on attractiveness and competitiveness ............................ 40
Box 2.1. The efficiency-equity trade-off ......................................................................................... 49
Box 2.2. Brief summary of selected empirical studies on decentralisation ...................................... 54
Box 2.3. Fiscal equalisation in OECD countries, main findings .................................................... 62
Box 2.4. Forms of public-private partnerships .............................................................................. 63
Box 2.5. Typology of contractual arrangements among levels of government (OECD, 2007) ........ 65
Box 2.6. Call for tenders for regional innovation programmes: a tool for revealing information and
producing learning before contracts ............................................................................................... 66
Box 2.7. The Vancouver Urban Development Agreement ................................................................ 69
Box 2.8. Co-ordination of regional policy at the central level: various models in OECD countries .... 70
Box 2.9. Metropolitan fiscal equalisation in Tokyo, Seoul, Istanbul and Copenhagen .................... 75
Box 2.10. Examples of mergers policies: the case of Denmark and Japan ...................................... 77
Box 2.11. Municipal mergers - the case of Japan ........................................................................... 77
Box 2.12. Municipal co-operation – the case of France ................................................................. 79
Box 2.13. Instruments for building staff capacities at sub-national level ....................................... 84
Box 2.14. Examples of performance indicators systems and incentives (from OECD Governing regional
development Policy: the use of performance indicators systems / to be published 2009) .............. 87
Box 2.15. Performance indicators systems advantages .................................................................... 88
INTRODUCTION

Regional competitive advantage in a global economy

1. The world economic system has never been more interdependent and globalised. Recent events in financial markets worldwide make it difficult to foresee how the world economic system might change. Against the backdrop of economic recession, effective policy responses are crucial to promoting growth, and regional policy is expected to demonstrate its ability to contribute. 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 that is less top-down and redistributive and focuses more on targeting investment to trigger growth.

2. The ultimate objective of policy is to make regions more productive and thereby improve their competitiveness and generate more growth. The competitiveness of regions, in turn, appears to stem from their capacity to make full use of local immobile assets and to attract more mobile resources. Some of these comparative advantages are found in the structure of the local economy and the characteristics of local firms, others are linked more to quality of life or the attractiveness of regions for investment. It is clear from both quantitative and qualitative research that some regions are clearly more able to attract and retain skilled people, high paying jobs and productive investments. Despite the overall persistence of disparities – an expression of these different comparative advantages -- there is evidence that these factors are susceptible to improvement through policy action, particularly where policy is targeted on existing, but under-used assets.

3. These unexploited potentials are found not only in dynamic urban areas, but also in rural areas and regions transitioning from an industrial heritage. Moreover, these advantages are not static but evolve, often 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.

4. The greater the capacity of a region to attract and retain mobile resources such as domestic and foreign investment, innovative firms and skilled labour, the more competitive it is. This capacity 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. OECD work has identified four main areas, including both traditional policy fields such as infrastructure development, as well as less-tangible assets, such as human and social capital, that economic changes, notably globalisation and technological
advances, are bringing to the fore. In each area, governments provide collective, locally targeted public goods, appropriate to the specific needs of rural and urban areas, to encourage and facilitate private initiative and enterprise.

5. This fluid pattern of economic development based on harnessing comparative advantages means that absolute advantage does not exist. There are limitless possible outcomes from the economic development process and economic theory can predict the more likely but cannot account for the many exceptions. This report examines the main economic arguments that underpin regional development policy, looking at how forces such as agglomeration, concentration, specialisation and comparative advantage play out in practice, identifying the main trends and the factors that are most open to policy influence.

6. The point of departure for an understanding of how regions develop and grow is the pattern of inequalities that characterise all industrial economies. These inequalities are an expression of some past or present relative economic advantage. Growth has in some cases been accompanied by a reduction in regional disparities, but in many others it has exacerbated them. The theoretical assumption that growth and labour mobility would ultimately resolve spatial disparities has rarely proved true in practice. For example, the richest US state (Washington DC) has more than five times the income of the poorest (Mississippi). Similarly, in Turkey, the difference between Kocaeli and Agri is also five-fold. In Mexico, the capital (DF) is more than six times richer than the poorest state in the South (Chiapas). In European countries, the richest region is generally more than double the income of the poorest region. Such wide disparities are well-known, even banal, yet from a traditional economic theory viewpoint, they are surprising. Economic theories can readily explain differences in income levels between different countries in terms of different levels of education, macroeconomic and structural policies, legal and financial systems, and barriers to foreign trade, immigration and capital flows. But within a country, all economic actors face the same policies, and capital and labour face no legal barriers to mobility. Hence per capita incomes “should be” or “should become” similar across regions. But they are not; and the evidence of convergence across regions is inconclusive.

The policy challenge

7. There is a widely held view that a reduction in regional disparities can be achieved by promoting faster economic growth at the national level (Williamson’s formulation of the Kuznets inverted U curve). However, there does not seem to be a natural inverse correlation between growth and disparity. Empirical evidence suggests that convergence occurs slowly, if at all. New economic geography models, by contrast, predict that in some cases the flows of investment and workers between regions reinforce rather than reduce concentration –and thereby disparities. Acknowledgement that, in some circumstances at least, convergence is not assured through market mechanisms has provided a justification for regional policies based on re-distributive subsidies and financial incentives.

8. Recognition that automatic mechanisms function poorly and that growth patterns are difficult to predict leads to a range of policy dilemmas that regional policy makers need to confront. Given that concentrations present so many advantages in terms of efficiency, it is tempting to conclude that national governments should foster further concentration. Why take jobs to people, when you can bring people to jobs? But there may be a trade off between efficiency and equity. Is national economic growth weakened if governments direct resources to lagging regions? Are regional disparities an inescapable feature of the development process? Furthermore, can increasing concentration lead to catastrophic levels of congestion? What determines growth at the regional level and how do geography and policies play a role in fostering progress? This report attempts to address some of these policy questions.

9. The bottom line for policymakers is where “hard” (e.g., physical capital) and soft (e.g. human capital) public investment can have the greatest impact in achieving overall policy goals. The answer is
increasingly complex. For example, urban concentrations are places that contribute to growth and provide efficiency gains, but they also pose their own internal problems. Agglomerations are sometimes unable to absorb the labour force that they attract. Some cities present an urban paradox, concentrating employment, skills and technological know-how, but also high rates of unemployment and a range of socio-economic problems. Continuing to focus on cities as motors of growth also overlooks the contribution of other types of regions to national growth that often outperform cities. The richest city regions in the richest OECD countries often have growth rates of income lower than the national average. Fast-growing cities are more usually found in the less advanced OECD countries. Many lagging regions in the OECD, by being far away from their potential frontier (steady-state) outperform cities in terms of economic growth. Many of those lagging regions contribute at least as much – if not more -- to national growth than the main urban concentration. In France for instance, 29% of national growth (1995-2005) was produced by the Paris metro-region (Ile-de-France) whereas lagging regions (those below the national income) contributed 44% to national growth. Thus, it is as important to seize the opportunities in lagging regions as it is to foster growth in urban concentrations for national policy objectives.

10. Recently, several reports have argued that there is a trade-off between equality and efficiency and that for economic reasons, the latter should be given priority. The truth is more complex and it can be argued that both dimensions should be mutually reinforcing rather than exclusive objectives. Efficiency policies can contribute to greater equity, and well-designed equity policies can contribute to national economic growth. The data show that positive effects on national growth rates are found both for cases where regional disparities increase and where they decline. By contrast, when the leading regions are losing their relative position over time, national growth rates tends to be lower. Even if the production of every good is more efficiently produced in the urban agglomeration, cities should concentrate their efforts in areas where they have the highest comparative advantage, and complement their efforts with other regions that can specialise in other areas.

Towards a more effective policy framework

11. In responding to these challenges, there is no unique policy formula that can be applied to all regions in all countries at all times. Regional policy in OECD countries reflects a growing recognition that poorer regions can best be helped by policies that boost their economic growth, without penalizing richer regions, and that richer regions can be helped to grow even richer. In brief, there exist policies that enable lagging regions to exploit their underutilized potential for stronger economic activity and higher incomes, and there exist policies that enable richer regions to further expand their existing potential. This represents a middle way between laissez faire approaches and strongly redistributive regional policies. For this to be achieved, two overriding conditions must be met. First, the regional policies that are put in place must be appropriate for the regional goals they are intended to achieve – and this includes evaluating their effects on other regions and other aspects of the economy – and, second, the policies themselves must be intelligently and coherently implemented and their impacts evaluated. This is more easily said than done, of course.

12. 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.
13. The data sources and a review of the terms used in the report are contained in an Explanatory Note at the end of this document.
CHAPTER 1. EXPLORING REGIONAL COMPETITIVE ADVANTAGE: PATTERNS OF REGIONAL GROWTH IN OECD COUNTRIES
Introduction and main points

14. As noted in the introduction, an understanding of how regional development policy can best support regional growth stems from an understanding of regional competitive advantage and how this translates into 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. As a result, some regions are richer than others, and/or are growing faster, and are thus in a better position to meet the challenges and opportunities presented by globalisation. This chapter attempts both to quantify the sorts of disparities in regional economic performance, and to analyse them.

15. The main analytical findings include the following:

- Across all OECD countries, regions display very wide variations in both per capita income levels and growth rates, relative to national averages.
- Urban areas tend to have higher income levels than rural regions, but not necessarily higher growth rates; there is no consistent relation between continuing agglomeration and increasing economic performance.
- The poorer the region the lower the proportion of working-age people in the labour force, and the higher the likelihood that they are unemployed.
- There are strong regional concentrations of economic activity, which help explain regional income differentials.
- Although there seems to be an underlying process of convergence in regional growth rates, for such convergence to occur depends on other factors, notably human capital and the role of innovation – and conditional on the presence of these two, also on infrastructure provision.
- The analysis implies that there is room for faster growth in all types of regions, based on combinations of higher utilisation of labour and rising productivity. Higher productivity in turn depends on other factors, and public policies have a role to play in influencing all of them.

16. The chapter explores the policy implications of these results across key dimensions of regional policy, including the “traditional” areas of infrastructure investment and human capital development to more recent areas of policy concern, notably innovation.

OECD countries have not succeeded in reducing income disparities across regions

17. OECD countries are characterised by significant regional income disparities (measured in terms of regional GDP). These wide differentials and measures to address them (in part via income redistribution policies) were traditionally the main focus of regional policies. The GDP of the richest region of a country is at least double that of the poorest region, and sometimes far more than that (Table 1.1). In many countries, the region containing the capital city is by far the richest. The main exceptions in the EU are Germany, where the Hamburg region is richer than the Berlin region, and Italy, where the Milan region is richer than Rome. Table 1.1 also shows that when the richest region is excluded, differentials are narrower. But they are still large. Even in Greece and Sweden, the poorest regions have an income gap exceeding 10% with the second-richest region, and for other countries, the gap is considerably wider. In general, the poorest regions in Europe are 20%-30% poorer than the second richest regions, implying 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 have wider income differentials.

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>
</tr>
<tr>
<td>Norway</td>
<td>1.87</td>
<td>1.26</td>
</tr>
<tr>
<td>Poland</td>
<td>2.32</td>
<td>1.57</td>
</tr>
<tr>
<td>Portugal</td>
<td>1.7</td>
<td>1.33</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>3.43</td>
<td>1.32</td>
</tr>
<tr>
<td>Spain</td>
<td>1.91</td>
<td>1.85</td>
</tr>
<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

18. Higher productivity and per capita incomes are found in major urban functional areas. But high GDP is not automatically translated into high employment: agglomerations do not necessarily have the capacity to absorb all the labour on offer. Indeed in 76% of the available 78 OECD Metro-regions, (defined by total size of population greater than 1.5 million, including commuters, and density of population), productivity levels were higher than their respective country averages in 2005, and an ever larger share 79% (Figure 1.1) display higher output per capita than their country average. Despite the high concentrations of wealth in metro-regions, their labour market outcomes are relatively weaker in comparison to their levels of productivity and output. Figures 1.2 and 1.3 compare the unemployment and employment rates respectively with national averages in 2005, and reveal that almost half (45%) of metro-regions had higher rates of unemployment than their countries and 35% of them had lower employment rates.
Figure 1.1. GDP per capita differentials among some OECD metro-regions and their respective countries, 2005

Coverage: data for labour productivity are from 2005 except for metro-regions from: the United States, Canada, Mexico (2004), New Zealand (2003), Switzerland (2002) and Turkey (2001)

Source: Own calculations based on a sample of urban areas where labour markets where self-contained and population was above 1.5 million people.
Figure 1.2. Unemployment rate differentials among some OECD metro-regions and their respective countries, 2005

Source: Own calculations based on a sample of urban areas where labour markets were self-contained and population was above 1.5 million people.
The level of spatial inequality can be measured using the standard inequality measures that are more usually applied to the distribution of individual or household incomes. This report computes three measures of regional inequality for OECD countries, over a number of years, usually from the early 1980s, or the early 1990s, to 2007. The measures are the Gini coefficient, the Atkinson measure, and a General Entropy measure (Appendix 2 for details of the construction of these measures). With few exceptions, the three measures are fairly consistent in all countries (see Figure 1.4).
Figure 1.4. Regional income disparities within OECD countries

* The initial year is 1963 for the United States, 1980 for Austria, Belgium, Finland, France, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, the United Kingdom; 1981 for Australia; 1985 for Korea; 1990 for the Czech Republic, Hungary, Poland, the Slovak Republic, and Turkey; and 1991 for Germany.

**The final year is 2007 for all countries except for Korea and Norway it is 2005 and for Turkey it is 2001.

Source: Own calculations using the Cambridge Econometrics Database for European countries and for the remaining countries data are taken from: Australian Bureau of Statistics for Australia, Statistics Canada for Canada, Ministry for Internal Affairs and Communications for Japan, Korea National Statistical Office for Korea, National Statistical Office (INEGI) for Mexico, and US Bureau of Economic Analysis for the United States.
In general, faster growth means increasing disparities. Although convergence and divergence are rarely smooth processes, it is possible to class countries 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 income growth differentials.

Table 1.2. National Growth Rates in Converging and Diverging Countries

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

min 1.9            min 4.2
max 9.6            max 11.3
median 3.9         median 5.45
average 4.27       average 6.31

Source: OECD.Stat

Poorer regions have weak labour markets and are more vulnerable to unemployment.

And the lower the per capita regional income, the higher the unemployment rate. There is usually a negative relationship between regional per capita incomes and their unemployment rates (Figure A.3.2 in Appendix 3). The statistical relationship across countries is even more robust than for that between per
capita GDP and employment rates. Again Korea and Poland are the only countries for which the coefficient is of the “wrong” sign, and the relationship is insignificant for Sweden and the USA. But in general, the poorer a region within a country, the more likely it has a higher-than-average unemployment rate.

23. If participation rates in the poorer regions could be brought up to that in the best-placed region, and unemployment rates brought down to that in the region with the lowest rate, per capita incomes in poorer regions would rise substantially, reducing regional imbalances in per capita GDP levels (although the very richest region would remain very rich). In that respect, and excluding most of the richest regions, regional income disparities are to a large extent, reflections of different labour market outcomes. The most salient feature of capital city regions and a few other major urban areas is their much higher average earnings2 rather than their unusually high employment rates, or low unemployment rates as noted previously. Not all countries follow this pattern, however. France, Germany, Korea, Sweden and the USA display regional income disparities which do not seem to arise mainly from differences in participation or unemployment rates. The most plausible explanation is that in those countries, poorer regions are poorer because average incomes of workers are lower, for other reasons such as possible demand-side factors. The appropriate policy priorities for addressing regional income disparities are likely to differ from those in the mainstream countries.

24. Spatial patterns of unemployment tend to persist over prolonged periods of time suggesting that employment problems in particular regions are not short term adjustments. The fact that the relative position in a region’s employment and unemployment rates did not experience significant changes during a period of important national labour market reform initiatives – between 1993 and 2003 – suggests that demand side factors play a significant role in explaining regional labour market performance. During this period 1993-2003 the relative position of 80% of European regions which had 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 (2005 OECD Employment Outlook). Two important demand side factors explaining regional differences identified in a previous study (OECD Employment Outlook 2005, Chapter 2) are education attainments, and production specialisation patterns. The impact of regional production specialisation patterns are estimated to make for 30% of the average employment differentials between less performing and better performing region 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) find links between educational attainment and regional unemployment rates. Regions where unskilled labour is relatively abundant are likely to be disproportionately affected by skill-biased technological change and competition from newly emerging countries.

25. Labour mobility could act to reduce regional employment and unemployment imbalances, but its impact is very limited. The movement of labour from depressed regions to better performing regions would be a self-equilibrating role when regional disparities persist over time. Hence consideration must be given to obstacles hindering geographic labour mobility arising from housing polices (Appendix 5) Nonetheless migration will not be the ultimate cure for regional imbalances even in the medium and long run. Although 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 retain and attract human capital from other regions 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.
Economic performance in regions is driven by the presence or absence of agglomeration economies

26. The inequalities described above are an outcome of several processes, of which the most significant seems to be concentration. Economic activity in the OECD is highly concentrated in space. Indeed in approximately half of OECD countries more than 40% of the national income is produced in a few core regions (i.e. in less than 10% of regions), that account for a small share of the country’s total surface (Figure 1.5). The concentration of economic activity in specific geographic locations occurs for a variety of reasons, but mainly because of benefits associated with economies of agglomeration. People want to live where firms -- and 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 pooled labour market, and where they know other firms can represent suppliers and buyers. This mechanism is circular and replicates over time inducing economic activity to further concentrate in a particular space.

Figure 1.5. Percent of national GDP in the top 10% of TL3 regions when ranked by GDP, 2005

Source: OECD Regions at a Glance 2009

27. New economic geography theories support the view that automatic equilibrium mechanisms to reduce inequalities are unlikely in practice. Mechanisms of circular or cumulative causation that drive increasing concentration have been studied by the New Economic Geography (NEG). 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 linkages’ (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 (IRS) 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 IRS induces other firms to locate there as well as people in search of higher wages, job opportunities and cultural values.

28. There are three main mechanisms that work to produce agglomeration economies:

- Mechanisms that deal with sharing of:
  - Indivisible facilities such as local public goods or facilities, particular to a place, that serve several individuals or firms. Some examples other than public goods 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.
  - The 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.
  - The gains from the narrower specialisation that can be sustained with higher production levels. Several firms specialise in producing complementary products, reducing overall production costs.
  - Risks. This refers to Marshall’s idea that an industry gains from having a constant market for skills, in Krugman’s words, a pooled labour market. 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.
  - Hold-up problems are alleviated. There is a possibility that contractual problems arising from renegotiation among buyers and suppliers result in one of the parties losing out by being held-up by the other party in a renegotiation. This discourages investment. However, if the agglomeration is extensive enough, agents can change to an alternative partner.

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

29. Economic activity is more concentrated than population. A higher degree of concentration in economic activity relative to population (Figures 1.6 and 1.7) reflects the fact that areas where economic activity is more concentrated (i.e. agglomeration economies) allow for higher capital intensive activities,
and more labour intensive activities in areas where economic activities are less concentrated (i.e. periphery areas).

Figure 1.6. Concentration of GDP and Population 2005, TL2 and TL3 Regions


30. Sectoral economic activities, especially manufacturing and many services, also tend to concentrated in particular places (Figure 1.7). While it is not the case that manufacturing is found only in cities, nor that all rural employment is in agriculture, there are nevertheless different concentrations of economic activity in different regions. This is relevant for regional policy, because it implies that policy
decisions and implementation need to take into account the sectoral specificities of individual regions. It also implies that sectoral policies necessarily have different regional impacts.

**Figure 1.7. Concentration of Agricultural, Manufacturing and Financial Activities in OECD Regions, Hirschman-Herfindahl Index of Industrial Concentration by TL2 Regions**

![Graph showing concentration values for different regions across different industries.]

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

31. **All OECD countries show strong geographic concentration in their principal economic sectors.** This could stem from greater economies of scale at the level of the plant (internal) but also at the level of the region (external). All OECD countries display regional concentration in all industries, as measured here by the standard Hirschman-Herfindahl (HHI) index applied to employment (see Appendix 1 for a
Since both very small and very large countries show greater concentration on this measure, an alternative, baptised the “Geographical Concentration Index” (GCI) based on HHI was developed (the structure of the index is described in Appendix 1). According to this measure, financial activities display the highest degrees of geographical concentration in OECD countries. The notable exceptions occur in Canada and Korea where agriculture seems more concentrated, and Mexico and Poland where manufacturing is more concentrated (Figure 1.8).

**Figure 1.8. Concentration of Economic Activity by Sector and OECD Country, Measured by the Geographical Hirschman-Herfindahl Index**

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

32. *Economies of agglomeration encourage innovative activity* through the presence of external knowledge spillovers and the proximity of firms with suppliers, with clients and other with other firms. In fact many urban concentrations are a country’s innovation pole. This is confirmed by a higher concentration of patenting activity -- an imperfect measure of innovation -- relative to GDP in all OECD countries (Figure 1.9), with the exception of Belgium where economic activity was more concentrated than patents in 2005.
Figure 1.9. Concentration of GDP and Patents 2005, TL2 Regions


Does increasing concentration ensure continued economic growth?

33. An increasing proportion of population of almost all countries in the world lives in cities. Indeed, for the first time in history, the population of cities exceeds that living in the countryside, and the largest cities in the world are no longer located in the richest countries. Even in the poorest developing countries, where agriculture remains the dominant economic activity, people flock to the biggest cities despite their very 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 also involves facing higher prices for accommodation, and possibly longer and more tedious commutes. Nevertheless, these are costs that are willingly paid by the increasing numbers of people who can afford to do so (Figure 1.10). 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 1.10. Percentage yearly change in total population living in large urban TL3 regions and in the whole country; 1995 to 2005

Source: OECD Regions at a Glance 2009

34. But the benefits associated with economies of agglomeration are not unlimited; cities can reach a point where they no longer provide increasing returns. New economic geography theory predicts that further concentration is not always the most desirable outcome. Encouraging even more concentration under these conditions will not yield higher growth rates; rather higher growth rates can be attained in the periphery. Concentration of economic activity should therefore not be pursued as an end to itself but rather as a means toward more efficient outcomes and higher growth rates. Comparing income levels and growth rates of metro-regions with respect to national and OECD averages over 5-year and 10-year periods reveal that although metro regions usually have higher-than-average per capita incomes, in most cases they have not experienced higher-than-average national growth rates. Figure 1.11 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.
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 where self-contained and population was above 1.5 million people.

35. **In more than half of OECD countries, the richest region contributed less than 25% to national growth during 1995-2005.** 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 richest regions in 85% of OECD countries, and it was higher than the contribution of regions above the national average in almost half the countries.(Table 1.3) In the Slovak Republic, the Czech Republic and Australia lagging regions contributed more than 60% of the overall national growth during the past decade.
Table 1.3. Annual average contribution the richest region, lagging regions, and regions above the national average in GDP per capita to national GDP, 1995-2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of TL2 regions</th>
<th>GDP growth</th>
<th>Richest region below average</th>
<th>Regions below 75% average</th>
<th>Richest region above average</th>
<th>Regions above 75% average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>8</td>
<td>4.1%</td>
<td>0.1%</td>
<td>2.5%</td>
<td>0.0%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Austria</td>
<td>9</td>
<td>1.4%</td>
<td>0.3%</td>
<td>0.7%</td>
<td>0.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Canada</td>
<td>12</td>
<td>3.9%</td>
<td>0.0%</td>
<td>1.0%</td>
<td>0.1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>8</td>
<td>2.9%</td>
<td>1.1%</td>
<td>1.8%</td>
<td>0.0%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Finland</td>
<td>5</td>
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<td>1.1%</td>
<td>0.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>France</td>
<td>22</td>
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<td>0.7%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Germany</td>
<td>16</td>
<td>1.4%</td>
<td>0.1%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Greece</td>
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<td>1.6%</td>
<td>1.8%</td>
<td>-0.3%</td>
<td>0.0%</td>
<td>1.8%</td>
</tr>
<tr>
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<td>7</td>
<td>5.0%</td>
<td>2.8%</td>
<td>1.7%</td>
<td>0.0%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Italy</td>
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<td>0.9%</td>
<td>0.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Japan</td>
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<td>0.7%</td>
<td>0.3%</td>
<td>0.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Korea</td>
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<td>5.2%</td>
<td>2.4%</td>
<td>1.2%</td>
<td>0.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Mexico</td>
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<td>0.8%</td>
<td>1.8%</td>
<td>0.8%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Netherlands</td>
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<td>1.8%</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0.0%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Norway</td>
<td>7</td>
<td>3.4%</td>
<td>1.3%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Poland</td>
<td>16</td>
<td>5.1%</td>
<td>1.6%</td>
<td>1.3%</td>
<td>0.0%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Portugal</td>
<td>7</td>
<td>2.1%</td>
<td>0.9%</td>
<td>1.0%</td>
<td>0.0%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>4</td>
<td>5.1%</td>
<td>1.7%</td>
<td>3.4%</td>
<td>1.8%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Spain</td>
<td>19</td>
<td>3.8%</td>
<td>0.8%</td>
<td>1.8%</td>
<td>0.1%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Sweden</td>
<td>8</td>
<td>3.3%</td>
<td>1.4%</td>
<td>1.9%</td>
<td>0.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Turkey</td>
<td>26</td>
<td>2.0%</td>
<td>0.2%</td>
<td>0.9%</td>
<td>0.5%</td>
<td>1.2%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>12</td>
<td>3.2%</td>
<td>0.8%</td>
<td>1.4%</td>
<td>0.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>United States</td>
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<td>3.4%</td>
<td>0.0%</td>
<td>1.7%</td>
<td>0.1%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Regions below/above the average are those regions with an initial (1995) GDP per capita below/above the national average
Countries with less than four TL2 regions (Ireland, Denmark, the Netherlands, Luxembourg, and Iceland) are not included.

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

36. Various negative externalities are associated with large concentrations of population in urban areas. 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 cost and loss of productivity due to long commuting time, higher health costs and impact on global warming due to 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 income 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 Competitive cities in the Global Economy, 2006). Although this hypothesis deserves to be further investigated, there is some empirical evidence from OECD reviews and conferences proceedings.

37. The most notable negative externality of urban concentration is traffic congestion. It is difficult to find statistical data assessing the costs of traffic congestion and available data follow different methodologies. In Seoul, traffic congestion costs increased over the years 1999-2002 from KRW 4.18 trillion to KRW 5.31 trillion (OECD Territorial Review, 2005). Traffic congestion in U.S. cities of all sizes has created a USD 78 billion annual drain on the U.S. economy in the form of 4.2 billion lost hours and 2.9 billion gallons of wasted fuel, the equivalent of 105 million weeks of vacation and 58 fully-loaded supertankers (Texas Transportation Institute, 2007). The 2007 Urban Mobility Report notes that congestion causes the average peak period traveller to spend an extra 38 hours of travel time and consume an additional 26 gallons of fuel, amounting to a cost of USD 710 per traveller.

38. For example, in Istanbul, traffic congestion has increased time loss and unreliability. One estimation of the total economic losses due to congestion is USD 7.2 billion per year, assuming that 1 million cars travel per day with an average two hour idle period in traffic, and considering gasoline losses, manpower losses, and depreciation. Another calculation of indirect economic losses by traffic congestion...
at the two bridges of the Strait of Istanbul is USD 5.6 billion per year (OECD Territorial Review of Istanbul). In Randstad-Holland, annual congestion costs were found to be around EUR 1.6 billion per year; this represents around 0.8% of the regional GDP (OECD Territorial Review Randstad, 2007). Estimations in Chinese cities indicate that congestion cost amounts to 12.5% of Beijing’s and 9.1% of Shanghai’s per capita income (Horizon Group, 2008). Furthermore, traffic and road conditions have serious implications on public safety. In Cape Town, for example, 59% of fatalities in road accidents were pedestrians (City of Cape Town, 2005). On the global level, by 2015 road accidents are predicted to overtake HIV/AIDS as the main cause of death and disability for people aged 5 to 19 in developing countries according to the World Health Organization (Toroyan and Peden, eds., 2007).

39. Congestion also generates environmental costs and these are increasingly seen as obstacles to further urban expansion. Congestion in urban concentration, in turn, produces different forms of pollution, such as reduced air and water quality, but also high noise levels and degradation of green areas. Part of this is due to what ecologists refer to as urban heat island effects. Cities tend to have higher air and surface temperatures compared to rural areas due to combined effects of the removal of local vegetation and natural surfaces as well as the addition of heat absorbing surfaces like dark roofs and pavements. This phenomenon aggravates heat-related negative implications of climate change and imposes costly energetic demands on urban systems (McPherson 1994). As temperatures increase, the need for air conditioning increases; this places more demand for power generation. In the United States, for example, an estimated 3-8% of annual electricity use is required to offset UHI effects (Grimm et al. 2008). Many cities are expanding urban heat islands with spreading populations and new building construction. (Figure 1.12)

Figure 1.12. Environmental costs from concentration: urban heat islands

Sprawl generates additional costs. In many cases, urbanisation and suburbanisation went hand in hand with urban sprawl, generating greater capital costs related to building more schools and extending roads, water and sewer lines and storm water drainage systems. Sprawling cities tend to be characterised by low economic efficiency and high environmental stress. Essentially sprawl is characterised by (1) leapfrog or scattered development, (2) commercial strip development, and (3) large expanses of low-density or single-use development. This entrenches an urban form of poor accessibility: residences may be far from out-of-home activities (residential accessibility) or out-of-home activities may be far from one another (destination accessibility). Both types affect the efficiency of household transport patterns and tend to increase daily vehicle miles travelled per capita which leads to greater air pollution/ozone levels. In Cape Town, for instance, commuting is intense and extends over a radius of 100 km (a pattern similar to
that of Los Angeles, but with a smaller population). The City of Cape Town’s ecological footprint (4.28 hectares per capita) has become so large that today it takes a land mass equal to the size of Greece to provide its inputs and process its waste. In other words, if everyone lived as people do in Cape Town, 2.3 planets would be required, a rate comparable to Canada (OECD 2008, Territorial Review of Cape Town).

41. The most complete empirical work on sprawl, “The Costs of Sprawl—2000”, applied scenarios based on estimates of under uncontrolled (sprawl) and controlled (some sprawl allowed, but overall more compact, higher density growth) for 15 economic areas in the United States. A result of a five year study, the study found that sprawl would result in USD 227 billion in additional costs in the U.S. over a 25-year period (Burchell et al., 2002). Researchers found that controlled growth could be accomplished with only a 20% increase in density and a 10% increase in floor area ratio for non-residential uses. This produced large cost savings: Burchell’s simulations estimated that a saving of 188 300 lane miles of local roads and USD 110 billion could be achieved by 2025 with more compact patterns, a saving of 11.8% in state and local road costs. Water and sewer savings, though significant, were smaller; with compact growth patterns, the combined cost savings of lower tap-in fees and 4.6 million fewer lateral lines would offers infrastructure savings of USD 12.6 billion, or 6.6%, over 25 years (Burchell et al., 2002). Sprawling and automobile-dependent cities also generally have a larger environmental footprint with high consumption of gasoline and particulate pollution from diesel exhaust. In addition, public transportation is often not financially viable in dispersed cities—compact cities facilitate public transit trips.

42. Depending on countries, national governments perceive this urban concentration either negatively or positively. This is related to the debate related to 1/ the impact of metro-regions on overall development within a national economy, i.e. whether the growth of metro-regions has positive or negative impacts on a country as well as 2/ to the negative externalities generated by excessive urbanisation. There are examples of OECD countries that have (and still) perceived their large metropolitan areas in a negative way and thus have implemented specific policies to contain the development of their largest metropolitan areas including France, Japan, the Netherlands, and the United Kingdom (Box 1.1). Policies include both incentive or deterrent measures to contain the development of large cities include specific regulations and taxes (new of higher taxes) to set up new offices (France, United Kingdom, Korea), direct subsidies to relocation of firms to other areas (Japan and to a certain extent, United Kingdom), restrictions on housing supply (the Netherlands), or relocation of public functions and universities (France, Korea).
Box 1.1. Examples of OECD countries that tried to monitor the growth of their largest metro-regions

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

In the Netherlands, the Randstad is above all a spatial planning concept that was born shortly after the Second World War and refers to the position of a belt of cities, in particular four large cities (Amsterdam, Rotterdam, The Hague and Utrecht) encircling a green open area named the Green Heart in the western part of the Netherlands. National spatial development policies have in recent decades switched back and forth between promoting and discouraging the development of the Randstad into a metropolitan region. Repeatedly, fears of the Randstad growing together into one “amorphous” metropolis have led to policy initiatives to limit expansion of the large cities and urban sprawl around them. This approach had two main consequences until the 1990s: within the Randstad, planning policies focused on the preservation of the green heart, seen as a key asset for the region, and the restriction in housing policy; and policies were focused on dispersing growth out of the Randstad towards more peripheral regions of the North and the East of the Netherlands. In reality, however, population growth continued to be concentrated in the Randstad and have led to urban sprawl. Despite explicit policies to concentrate population growth in designated areas and to keep the Green Heart an area unaffected by urban construction, the whole Randstad area has gradually become more urbanised, including the Green Heart (OECD Territorial Review Randstad, 2007).

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

43. The role of large cities on the international marketplace is impacting the perception of national governments towards high urban concentration. Such policy approach has evolved over time, especially in the context of globalisation whereby national governments increasingly perceived that they need to foster the international competitiveness position of their major metropolitan regions. In the case of France, for instance, policy-makers are questioning the balanced territorial approach that has been implemented more or less since the 60s-80s and which has led to the emergence of eight major provincial – although not global – metropolitan areas (Toulouse, Lille, Nancy, Strasbourg, Lyon, Nantes, Bordeaux and Marseille). Although the Paris metro-region continues to play a predominant role in the country, concerns have been expressed about the French redeployment policy towards other urban poles of growth that might hold back international competitiveness of Paris in the context of increasing globalised economy. The OECD review of France highlighted the fact that recently the region lost some rank against its EU major competitors for its innovation capacity and competitiveness, partly explained by the decision to relocate some public research centres outside the region (OECD Territorial Review of France, 2006). This trend probably
explains the recent decision to create a Ministry for the capital region with a mandate to come up with a strategy to enhance international competitiveness position of Paris.

44. More generally, the debate over urban concentration is linked to that which tends to oppose urban (including the largest cities) versus rural regions. National governments in OECD countries have for a while oppose “rich urban regions with “lagging rural” areas so that distribution of funds for regional development policies went mainly to what used to be classified as “rural”. OECD work on regional development policies demonstrated that focussing specifically on lagging regions, and thus excluding many urban areas, did not produce positive outcome. Richest areas, which are in many cases urban, continue to attract people and this in spite of negative externalities. Interestingly, the acceleration of the urbanisation process in China occurred despite a successive implementation of anti-urban policy measures from the central government (Box 1.2.). The Chinese government’s behaviour towards urban areas changed has changed tremendously. Economic development of rural areas is a priority, but the central government understands the economic sustainability of the different types or regions are closely interlinked (Trends and Policy in urban China, OECD 2008).

Box 1.2. Evolution of urban policies in China: from anti-urban to the recognition of the role of large metropolitan areas

As China’s economy progressed, the national government responded conservatively to rapid urban expansion and growing rural-urban migration. In the national Eighth Five Year Plan for 1991-1995, ‘urbanization’ was explicitly addressed for the first time. The policy, however, was a re-iteration of the dogma of the 1980s: ‘control the big cities, moderate development to medium-sized cities, and encourage the growth of small cities’. The national Ninth Five Year Plan for 1996-2000 again repeated the central government’s urban policy, but with a heavier emphasis on the control of large cities: the nuance changed to ‘strictly control the growth of big cities, reasonably develop medium-sized cities and small cities’.

For the first time since 1949, the Tenth Five Year Plan (2001-2005) explicitly placed city and town-based urbanization as one of five key policy thrusts. It outlined three key policy measures to promote towns-based urbanization: 1) allowing conversion of agricultural to non-agricultural hukou for rural residents permanently relocating to towns within their counties; 2) land reforms designed to create secondary markets in farming rights by allowing farmers to permanently sell off their rights to other farmers to encourage economies of scale in production; and 3) promotion of industrialization in towns with implied approval of conversion of agricultural land to town construction land (largely for industrial parks). These three policy measures however did not have their desired effects of stimulating any significant town-based urbanization, given the fact of low attraction of towns to industrial investment (except for polluting industries avoiding more stringent regulatory oversight in urban areas).

After decades of policies that ranged from anti-urban to ambivalence with cities, the government appears to have recently recognized that large cities can make major contributions to the country’s economic development and to sustaining China’s long term growth. In the Eleventh Five Year Plan (2006-2010) it has placed much stronger emphasis on the development of metropolitan regions across the country, including measures to better integrate strategic towns into metropolitan economies. The Eleventh Five Year Plan is now promoting the urbanization process through ‘balanced development’ of cities and towns regardless of their size but it is no clear indication how it will address the issue.

45. National growth depends on all regions, not only the leading few. A country’s growth rate in GDP is the weighted sum of the regional growth rates within that country. In order to maximize overall national growth rates it is desirable to promote growth in all regions either by enhancing a region to approach closer to its production possibility frontier or by shifting the production possibility frontier outwards, or both. For this, it is essential to identify the main determinants of growth at the regional level, to understand the benefits and limits of economies of agglomerations, the dynamics that exist between concentration and inequality and finally the role of labour markets in order to boost overall national growth rates. Hence for regional policies to be effective there is a need for theories of economic output and growth that take into account these striking differences, explain them, and provide useful guidelines for policy.
Explaining patterns of regional growth

46. Econometric analysis can shed some light into the factors that influence regional economic growth among OECD regions. The approach involves diverse econometric model explaining economic growth among regions using not only the usual determinants of economic growth, but also geographical variables that are considered to be important in influencing concentration and dispersion of economic activity. Initially, we run a cross-section model of conditional convergence (Box 1.3) and later include a dynamic version through panel-data econometrics. The model attempts to explain regional growth not only by the usual determinants of growth, but also by using – in as much as possible -- variables that describe the dynamics of concentration and dispersion which can be argued to be at the heart of growth and inequality. One of the reasons for firms’ agglomeration lies in backward and forward linkages and other agglomeration economies. The model incorporates these types of external economies to the firm by introducing sectoral specialisation indicators. Similarly, the NEG also argues that a second reason that explains agglomeration is thick markets. The model explores the impact that distance to the market or access to them has an impact on economic growth.

<table>
<thead>
<tr>
<th>Box 1.3. Explanation of the regional growth model using a cross-section approach</th>
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<td>The model that is tested is:</td>
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| \[
| \frac{1}{T} \ln \left( \frac{GPD_{t+T}}{GDP} \right) = \alpha + \beta_1 \ln(GDP_t) + \beta_2 \ln(Inf_t) + \beta_3 (Pr_{Ed}_{att_t}) + \beta_4 \ln(Ti_{Ed}_{att_t}) + \\
| + \beta_5 ER_t + \beta_6 \ln(Pat_t) + \beta_7 \ln(GDE_{Exp_{B_t}}) + \beta_8 \ln(GDE_{Exp_{G_t}}) + \beta_9 \ln(Spec_{Ag_t}) + \\
| + \beta_{10} \ln(Spec_{Man_t}) + \beta_{11} \ln(Market_{Dist_t}) + \beta_{12} \ln(Accessibility_t) |
| \]
| where \( t = 1995 \) and \( T=9 \), and annual average per capita GDP growth rates are regressed on: |
| 1. log of Initial per capita GDP log of motorway density |
| 2. log of primary educational attainment |
| 3. log of tertiary educational attainment |
| 4. employment rates |
| 5. log of patent applications |
| 6. log of domestic expenditures in business activity (or) business RD to GDP |
| 7. log of domestic expenditures in government activity (or) government RD to GDP |
| 8. log of agglomeration economic activity in the agriculture and fishing sector |
| 9. log of agglomeration economic activity in financial intermediation |
| 10. log of distance to markets (see Appendix 1 for a description of the methodology to measures distance to markets) |
| 11. log of accessibility (see Appendix 1 for a description of the methodology to measures accessibility) |
47. The first explanatory variable is included to account for convergence or divergence of regional income. A negative sign in this variable would signal that relatively poorer regions are growing faster and therefore a process of convergence is under way. Conversely, a positive sign would indicate that richer regions are growing faster and thus that regional incomes are diverging. This convergence or divergence trend will be conditional on a series of variables that determine growth. As economic growth theories argue that the forces behind long-run growth are physical capital, human capital and innovation, a number of variables have been introduced to model them. First, as capital stock data at the regional level are not available, a measure of infrastructure (motorways) was included. Second, human capital is included in the form of educational attainment for primary schooling and for tertiary education. Third, 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.

48. 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 is taking place across OECD regions, but that this is 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 that is that investment in public infrastructure does not stimulate growth in the absence of workers with higher levels of education and innovation activity which suggest policy co-ordination opportunities between human capital formation enhancing innovation and infrastructure provision. This is a discussion that will be recalled in the following chapter as they constitute fundamentals of regional policy. The insignificant coefficients in models 8 and 9 can be caused by the high correlation that exists between tertiary education and the innovation indicators (Appendix 6).

49. 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, it is interesting to note that 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. It is also important to note that employment rates do not significantly affect growth, although they do of course affect per capita income levels. One possible explanation for the inverse 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. As with lower incomes, lower employment rates allow regional economies to rapidly tap on those dormant resources and achieve higher growth rates. Again, as with lower incomes and convergence, as employment rates grow they approach the frontier and therefore growth rates are reduced (this phenomenon is referred to as the distance from the steady-state in economic growth literature).

50. Innovation is clearly important and its influence would increase of 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 (model 6). However, when taking into account total R&D expenditure the relationship between innovation and growth falls down. This is a puzzling result, and goes against findings at the national level, which tend to show a positive association between private R&D and growth. It may reflect the fact that private R&D is heavily concentrated in a few sectors and regions, whereas its benefits are spread across regions. The spread of those benefits to other regions is more likely to happen over time as innovation is assimilated by other regions in the form of technological absorption.

51. Innovation has a local effect, but over time the impact goes beyond the region through know how and technological modernisation in other regions. To further explore the impact of innovation on growth,
model 11 (Appendix 6) includes different measures of R&D, namely expenditure by businesses, government and higher education institutions (HEI). The results show a positive and significant relationship between government expenditure in R&D and growth. While the result of government expenditure on R&D is in line with the impact of patents on growth, the results for R&D overall are rather mix. In order to further explore the relationship between inputs in the innovation process such as R&D expenditure –or human capital- and outcomes such as innovation, Appendix 6 will explore in detail trends in innovation and will present a knowledge production function that will be modelled in a similar fashion as in this section. The results suggest that in fact the impact of R&D on growth is indirect through outcomes such as patents.
Box 1.4. Summarising the results from related analysis

Other recent research models using the regional database 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:

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

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

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

These results suggest that policymakers in order to promote regional growth should have a comprehensive regional policy in mind that not only by linking regions through infrastructure investments, but also fostering human capital formation and facilitates the process of innovation. The risk of partial visions of a regional policy lie -- as our models seem to suggest -- on a leaking instead of linking process by providing only infrastructure or 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 6)

However, an analysis lagging infrastructure, human capital and innovation by 3 and 5 years in order to measure whether there is a time-lag in the impact that these factors on growth reveal that:

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

- **Innovation** is a longer-term process having 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 6) Our results show that:

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

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

- **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 6) 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 their neighbours. 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.
What does this mean for regional policy?

52. *Current policy debate is divided between those measures that promote efficiency (growth) and those that promote equity (reduced disparities) as main policy objectives.* This section addresses the following main points:

- Equity and efficiency are not necessarily trade-offs and regional policy is the vehicle to address both concerns.

- Regional policy is not simply the collection of sectoral policies with territorial impact, but rather co-ordinated policies with a multi-level governance approach.

- Regional policy is comprised of three dimensions that need to be present in order for it to be effective in tackling both equity and efficiency objectives and they refer to capital/infrastructure, labour and human capital, and business environment/innovation.

- The first two elements (infrastructure and human capital) while highly desirable, might have the reverse impact than the one originally intended.

- The part of regional policy that makes the other two work in the intended way – to produce growth and more balanced development at the same time - is business environment and more particularly innovation.

- Finally, innovation has to be addressed from the perspective of creating regional innovation systems able to produce innovation and knowledge for a region even in unfavourable contexts.

Clarifying the objectives of regional policy and links with analytical results

53. *The key concern for regional policy makers is to understand if equity and efficiency objectives can be complementary objectives for investment rather than a trade-off.* For individual regions it is evident that policies aimed at improving living standards for citizens in their territory are important, but these may conflict with development goals at the national level. 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 economy’s growth poles – which are assumed to be the richest regions. Recent examples of that logic can be found in the *Sapir Report* and the forthcoming *World Development Report* (2008). On the other hand, the traditional argument in favour of assisting lagging regions is based on equity considerations: wide disparities in household incomes across regions in the same country are held to be politically and socially unacceptable to different degrees in different countries. In a sense, this debate assumes that there is a trade-off between equity and efficiency. However, insofar as there are underutilised resources in lagging regions, mobilising them will contribute to both equity and national development objectives. Evidence in previous sections show that lagging regions generate an important part of national economic growth; where they underperform, the national output suffers.

54. *Where the goal is equity, regional policies should be directed at raising participation rates and productivity levels in the lagging regions, rather than income redistribution.* The justification for equity policies is that it is socially and politically unacceptable for average incomes to vary widely and persistently across the territory of a nation. Indeed, regional policies were traditionally mainly focused on reducing such differentials, and in particular diverting resources to the very poorest regions. Those policies may have had some success, although counterfactuals are hard to establish. But in any case, regional income redistribution policies may not be the optimal way to address regional income differentials. Even
within regions, individual household incomes differ widely, more widely in fact than between regions. Hence if reducing household income disparities is the objective, the policy instrument should be one that targets directly the poor (and rich) households. Such policy instruments exist, in the form of progressive income tax schedules and social security systems. It is far from clear that regional income redistribution policies can do better than these.

The proponents of prioritising the efficiency objective regard economic growth as the main performance indicator. The theoretical underpinning is that of increasing returns to scale and an assumption that agglomeration economics will lead to efficient allocation of investment, probably in core regions. It is true that concentrations generates centripetal forces – such as thick markets, a pooled labour market, backward and forward linkages, knowledge spillovers among others -- and therefore become places where much wealth is created. However, there are also centrifugal forces such as congestion costs, land prices, diseconomies of scale that may result not only in dispersion of production back into the periphery or other centres, but also increased commuting times, land prices, pollution, as well as under-provision of housing, public goods and urban spaces resulting in a loss of welfare for mobile workers. (Box 1.5)

**Box 1.5. Economic efficiency and the new economic geography**

The logic of their argument is based on one of the results from the new economic geography models (NEG). This theory shows that both concentration and dispersion of economic activity are possible depending on a particular set of forces. Nevertheless, one of the main assumptions is that labour is perfectly mobile and that one of the sectors exhibits increasing returns to scale. While the latter is a particular innovation of this stream of literature and something that reflects the real incentives to concentrate geographically faced by firms and workers, the perfect mobility assumption does not correspond with reality even in the longer term, and even in a highly mobile country such as the USA (Appendix 5). The decision to migrate across regions seems to be not only related to job opportunities, but also to cultural, language and even structural barriers to mobility, such as state-based social security benefits or qualification periods for access to social housing. Other barriers include skill mismatches in the job market, the cost of retraining, and local social capital. 

The main outcomes of the NEG models are found in three scenarios related to three different levels of transport costs. However, the intermediate level of transport costs case – which is the most realistic -- has five different solutions: concentration in either of the two regions considered in the model; equalisation of production in both regions; and the possibility for two scenarios where some concentration is present in one of the regions, but some production is still retained by the periphery. Although the last results are technically unstable in theory, as small changes can trigger a chain reaction of increasing concentration or dispersion, most of the real world is of this type: some concentration in the ‘core’, as well as some production in the ‘periphery’.

55. **Evidence suggests that regional development, for either equity or competitiveness reasons, depends on the interplay between physical capital, human capital and the business environment.** The results of the analysis show the strong interaction between different types of regional assets. Infrastructure is only related to growth when both human capital and innovation are present. An interpretation of these results relates to the dynamics discussed above; infrastructure and human capital formation and mobility create strong incentives for further concentration only when a business environment conducive to the creation of ideas and ultimately innovation is present.

56. **The three dimensions of regional policy distinguished by the analysis can be characterised as: the capital stock dimension; the labour dimension and the local (business) environment dimension.** The first dimension refers to the capital invested by the national government in the regions. A predominant role in this component of regional policy is played by infrastructure. Many national government policies have tried to reduce disparities by building connections – roads and other transport-related means -- and by providing public goods and services in the regions. The argument here is that by providing connectivity,
lagging regions have the opportunity of reaching greater markets. Many examples of this type of policies can be found in the past, but more recently in Mexico through the Plan-Puebla-Panama, or the compensatory policies of the EU before the Lisbon Strategy. However, if regional policy only concentrates in providing capital in the form of infrastructure, a lagging region may end up losing economic activity. This “leaking by linking” phenomenon described by Hirschmann (1958) is also a possible result of the new economic geography; by reducing transport costs, firms could find it cheaper to concentrate in the core, reap the benefits of agglomeration economies and thick markets and ship the goods to the periphery. As a result a regional policy based on the single axis of infrastructure provision, that is, a sectoral policy with a territorial impact, may achieve the reverse of what it was intended to produce.

57. Labour mobility among skilled workers is sufficiently high that human capital formation in peripheral regions could promote brain drain unless employment opportunities are also promoted. Policies aimed at the quality and the mobility of workers are the key second pillar of regional policies. If barriers to mobility of labour are sufficiently reduced, workers may find it easy to migrate to the core and thus make it harder for local companies to recruit. Moreover, if labour mobility policies are implemented at the same time that human capital formation is boosted in the periphery, new talent created there will find it more attractive to concentrate in the core where their skills are more highly remunerated. Again, a well-intentioned sectoral policy may very well create undesired outcomes.

58. Both connectivity and improvements in human capital are highly desirable in lagging areas, but both can have “leakage” outcomes if the business environment is not attractive for businesses and investors. Without the business environment dimension, economic benefits from infrastructure and human capital investments might not accrue in the target region. If they contribute to increasing concentration they might impede balanced national development, and perhaps increase land prices, pollution, commuting times and more generally congestion costs at the core. Therefore, the third dimension is crucial for an effective regional policy. This is a component that is intimately related to regional and local actors as it refers to the regional and local business environment. Some of the elements in that dimension are regulation or de-regulation of markets to ease the start-up of firms, the development of regional innovation systems that allow for spin-offs to emerge, flexible labour markets or internal connectivity for easier regional and local commuting. By providing some of these elements, governments may be able to encourage local firms to stay and reap the benefits of human capital improvements, knowledge spillovers and innovation. As many of these elements are essentially regional or even sometimes local, there is also a role for regional and local governments to play and therefore for bottom-up approaches to policymaking.

59. This argues in favour of a co-ordinated policy that takes into account investment, human capital and business environment. This nevertheless is not a one-size fits-all framework, but rather the contrary as it allows different levels of government – and indeed other actors and local social capital -- to produce different mixes of these three dimensions depending on what is important in each of the regions.

Growth enhancing infrastructure and public goods (the capital dimension of regional policies)

60. 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.

61. 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 1.13). Taking 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 1.13. Transport infrastructure investment and economic growth effects](image)

Source: Adapted from Larkshmanan, 2002

62. As an example, the main focus of transport policy since 2004 in Poland 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 11.2 billion from EU funds and EUR 1.98 from national funds), while 21% is for rail transport and 13% for urban transport (Table 2.2). In the regional programmes, 26% of the funding goes to transport (EUR 4.4 billion out of a total of EUR 16.6 billion) (OECD Territorial Review of Poland, 2008). 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. 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.

63. **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 when positive externalities exist in the region. The discussion of innovation and specialisation suggests that both depend on an efficient, sufficient infrastructure network in order for the different types of spatial agglomeration effects to operate. 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 latent economies do not exist, 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) is clear 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 1.6) The challenge for policymakers explicit in the recommendations is to ensure that the potential in the now unified labour market, research community, and enterprise systems is realised. Vienna-Bratislava provides a similar example: it is expected that accession of Slovakia to the EU will allow a larger and stronger functional economic area to develop that generates scale and scope advantages for local firms that did not exist before. Providing infrastructure to link the opened border is a first step, but then policy challenges relating to economic specialisation, innovation and governance come to the fore.
Box 1.6. 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. The intensified 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 is also modifying its relative position within the two countries. This is a relatively minor problem for Denmark, where Copenhagen’s leading role increased as a national capital and as a main attraction pole in the Öresund Region. On the contrary in Sweden, the growth of the Öresund Region will inevitably create a more significant impact. In particular, Stockholm and Gothenburg have perceived the importance of the Öresund growth and are reacting to its increased competitiveness. On one side, the reinforcement of Malmö and Skåne has caused a new development area in Sweden, speeding up the overall country output. On the other side, the acceleration of growth in Southern Sweden has upset the traditional political agreement on regional policy in the country. In fact, due to its marginality, the North had always been strongly privileged in the allocation of “regional” subsidies, as the central part of Sweden (along the Stockholm-Gothenburg axis) was self-sufficient and the South, despite the industrial decline in Malmö, had always been considered already “developed” and was not considered worthy of particular intervention. The opportunity represented by the growth of the Öresund Region has modified this attitude. The political orientation towards favouring equality rather than supporting dynamism is slowly reversing and a greater attention is being paid to the Southern part of Sweden, also because it has become a stronger link toward the rest of Europe.

The third territorial level of competitiveness, which is indirectly enhanced by the new infrastructural investments in the Öresund Region, takes place on an international scale. The fact that Copenhagen and Malmö are starting to be considered a joint global hub and have climbed in the European hierarchy of metropolitan areas is indeed playing a significant role in the competitive growth of the region. The most meaningful factor of such 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.

Source: OECD Territorial Review of Öresund

64. A link between rich and poor regions does not always benefit the poor region, as the classic example of Italy’s Mezzogiorno shows. For example, improved expressways 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 eastern Polish regions. It is necessary to connect transport to overall policies to increase regional competitiveness, satisfying both labour market and housing needs. An improved east-west road network will not in itself ensure FDI attraction and increased employment (OECD Territorial Review of Poland, 2008). A number of studies have undermined the widespread conviction that motorways are essential to regional development and employment creation. The economic impact can be positive or negative, depending on the specific circumstances of a given region. Other critical conditions to be met include the need for a qualified workforce and better telecommunications. Because roads have a long life span, they require a very careful economic appraisal. 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: (1) better use of existing infrastructure, (2) better targeting of new investment and (3) mechanisms to increase the level of private sector financing in public projects.

65. The threatened world recession poses significant challenges for regional development, but also an opportunity for contributing to national recovery. Traditional monetary policy stimulus is running out of margin for manoeuvre, but fiscal policy instruments may still be able to help, for example regional infrastructure expenditure. In the long-run, targeted investments can help connect regions, improve the business environment and innovation, as well as increase regional attractiveness. In the short and medium term, infrastructure investment creates jobs directly, but more importantly indirectly by demanding inputs from other sectors. Ultimately, of course, higher spending has to be matched sooner or later by higher taxes – but potentially on higher incomes.

**Human capital formation and strengthening labour markets: the labour dimension of regional policies**

66. Investing in human capital is a key element of public investment. For a long time it has been neglected in regional policies in favour of investment in hard infrastructure. Now the situation has changed dramatically, 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 channeled towards improving human capital in Poland (education attainment and quality of education) through the Human Capital Operational Programme that accounts for 14% of the funding. (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 National Territorial Review of Portugal).

67. Evidence derived from the analysis suggests that human capital plays a significant role in enhancing regional growth. This means that regions where unskilled labour is relatively abundant are likely to be disproportionately affected by skill-biased technological change and vice-versa. The point of departure is to ensure good access to quality education at all levels for all citizens. This has been recognised, for example, 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. Chile’s population aged 25-64 had, on average, less than ten years of schooling in 2002, compared to the OECD average of nearly 12. In addition, the quality of education 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).

68. 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. This is particular relevant for lagging regions who typically suffer from a high propensity to migrate by their high-skilled labour because of lower wages and less attractive job-opportunities. In the context of industrial restructuring, Pittsburgh (USA) has managed to retain graduates by improving telecommunication infrastructure locally and by the active role played by local universities in facilitating better labour supply and demand matches. In addition,
the Pennsylvania Land Recycling Programme successfully replaced old industrial sites by service and new economy businesses, leading-edge start-ups, e-commerce incubators, vast shopping malls, theme parks, parking lots, restaurants and housing developments. (OECD Territorial Review of Champagne-Ardenne) Furthermore urban agglomerations have difficulty in absorbing the entire incoming labour supply, therefore growth-enhancing policies in all regions can ameliorate any excess labour supply present in agglomerations. Nevertheless labour mobility should be encouraged with special attention to reforms in housing policy in the areas of (i) home ownership such as tax and benefit systems pertaining to housing markets (ii) social housing policies and (iii) rental market policies.

69. Labour is neither fully fixed nor fully mobile because of systemic and personal barriers to migration. Standard neo-classical theory treats labour as mobile, and in many theories capital is considered to be fixed. While in reality, both factors are quasi-fixed in the short-term, in the long-run it is not clear whether mobility is fully achieved in either case (Oi, 1966). Economic intuition would tell us 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. Nonetheless, the results are not as robust as would be expected, perhaps because the US has in place systemic barriers to mobility through state-based social security regimes by which workers may lose the accrual of service years when moving across states. European Commission research has found that only a very small minority of Europeans migrate for working reasons (see Appendix 5 for more data on this issue).

70. Labour mobility is imperfectly linked to employment opportunities or wage levels, suggesting that strengthening regional labour markets remains the most effective policy response. While in the USA, migrants seem to react to job opportunities, it does not seem to happen that way in Spain. In either case, it is also unclear whether or not migration affects the recipient region’s housing prices or that migrants necessarily move to higher income places. Possible explanations in the case of the US range from possible structural barriers to mobility given the rules of social security, to a possible mismatch between the qualifications of unemployed migrants searching for jobs, and the available job requirements. In the Spanish case, mobility is probably highest among the most qualified people, which does not affect long-term unemployment rates. Ultimately, it is very probable that cultural and even linguistic barriers may hamper mobility across European regions and certainly in the Spanish case.

Making regions more innovative: the business environment dimension of regional policies

71. In the longer term, material living standards can continue rising only through innovation. Innovation here covers the successful production of essentially new or greatly improved goods and services, and also innovatory ways of producing distributing and marketing existing products. If there were no new products, demand would eventually become satiated, the incentive to invest in higher output would disappear and growth would grind to a halt. Successful innovation creates the new demand to match the new supply. Innovatory processes at all stages of production and distribution enable higher output to be produced with the same resources, permitting productivity and efficiency to rise indefinitely, and faster than inputs of labour and capital. Hence innovation, in the form of new products and technological progress is a sine qua non for long-term growth, and the more intense the innovation activity, the faster growth will be.

72. The importance of innovation as a spur to growth has long been recognized, and is currently an important theme in the work of the OECD. At the regional level this importance is confirmed in the regional model of growth where innovation appears to positively influence regional growth rates. 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 ultimate aim is to understand whether it makes sense for governments to continue or increase their innovation-related spending in order to achieve specific innovation-related targets. Is it a question of more resources, or a different allocation of resources. Or, indeed, is it so difficult to make a causal link between public policy and innovation “success” that a new approach to understanding the objective of public investment needs to be developed? The first question has been to understand what we mean by innovation “success”. This usually means making a link between innovation and economic growth.

73. At the national level, there is a strong theoretical and empirical literature linking innovation with growth, usually emphasising the way that technological progress improves productivity at the level of the firm, industry and country (Cameron 1998). At the regional level, there have also been efforts to understand and measure the dynamics of innovation and explain differential performance per unit of innovation related investment. Three areas of investigation stand out in the theoretical and empirical literature: The first approach is to look at the different stocks of innovation related capital or inputs that each region has at its disposal and use those different endowments to explain performance. Another approach looks at the regional knowledge environment, the milieu, in which firms operate as an explanation of over- or under-performance. Michael Storper (1992), for example, describes the way firms in specific places benefit from trust-based transaction cost economies. Finally, research has looked at the functioning of a so-called regional innovation system for clues to why some places seem to perform better than others. A well-functioning innovation system maximises the commercial output from knowledge creation, while a poorly functioning innovation system tends to inhibit innovative activity.

74. The common theme is the emphasis on knowledge flows and the concept of spillovers. Several studies have attempted to trace knowledge flows, both within and across regions. Interest in this issue was sparked by Paul Krugman who famously noted that knowledge flows leave no paper trails and thus cannot be mapped or traced, making the study of spillovers difficult if not impossible. Nonetheless, a large body of literature has emerged that tries to do precisely this. Research has focused on two main questions: (1) how knowledge flows around the system within a region, and (2) how knowledge spills from one place to another, from a region to its neighbours.

75. Policies that encourage innovation include framework policies such as a stable macroeconomic background that encourages investment, product market policies that encourage firms to compete via innovation, labour market policies that allow employers to reallocate labour as products and production methods change, an education system that produces adequate numbers of trained researchers, and a financial system that can provide funds for possibly risky investment projects and start-ups. Normally, framework policies have no regional dimension. Some targeted policies can have a regional dimension, for example particular regions get favourable treatment for R&D grants, or are targeted for the installation of science parks or other kinds of innovation centres. The level of innovation in a country is also influenced by the generation and diffusion of new technology and knowledge, which is in turn a function of investment in basic and applied R&D, the technology transfer effort made by the government and the success of the education system in producing science, business studies and engineering graduates. Regional educational institutions can have a key role in helping to build local capacity through technology transfer and bridging actions. The Swiss strategy for territorial development focuses on linking training with local needs and stimulate technology transfer. The creation of HESs (Hautes écoles spécialisées) has been central to achieve this goal as they fill a gap between (i) universities and the secondary level, (ii) between theoretical and technical knowledge training, (iii) between research and marketable technologies (OECD Territorial Review of Switzerland).

76. The absorptive capacity of firms is also crucial for innovative ideas to be translated into productivity gains by firms that are not themselves technology generators. Absorptive capacity, in turn, is closely linked to cultural traits relating to entrepreneurship and inter-firm collaboration as well as the level
of technical and general education in the workforce. This has been a particular issue for some lagging regions. The Atlantic Canada Opportunities Agency (ACOA) has partnered with provinces to improve entrepreneurship curricula by helping establish a forum for colleges and universities through which cooperation on R&D can be facilitated, and to link universities to local and national businesses. (OECD Territorial Review of Canada)

77. 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. In Nordic countries like Finland, Norway or Sweden dominated by one single metropolitan area, and large number of urban regions (also called city-regions), national governments are trying to foster urban concentration in the latter group, i.e. city-regions. Here central governments are seeking the development of a number of subsidiary poles because they think it is the appropriate answer to counter-balance a dominant but also to foster national economic growth through a number of growth poles. 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 Territorial Review of Finland, 2005).

Integrating specific urban and rural needs into regional policies

Building competitive and sustainable urban areas

78. In many OECD countries, innovation activity tends to concentrate in large cities. Policymakers are no longer solely preoccupied with the regeneration of declining neighbourhoods (as it might have been the case in the UK in the 1970s for example) but with creating competitive urban spaces capable of attracting high value-added investment in the most innovative sectors of the global economy. Although policy decisions remain contingent on country-specific factors, encouraging urban development can be done in four major ways.

79. First, governments need to decide whether to build growth-supporting infrastructure in already dynamic urban poles (in the hope of further boosting their global standing and generating positive spillovers) or in unfavoured cities (with the objective of creating subsidiary growth poles). Many OECD countries seem to concentrate resources on a few poles of growth in practice, but some have successfully tried to ensure that supporting ‘champion’ cities did not compromise the development of other urban areas. For example, the Regional Centre Programme launched in Finland in 2004 aimed at establishing a co-operative network of small and medium-sized cities covering every region and province in the country. German spatial planning policy also sought to link the eleven most developed “European metropolitan regions” (europäische Metropolregionen) with smaller centres, via secondary road networks for example.

80. Second, urban policy needs to 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).
81. Third, 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). Exploiting a city’s particular cultural assets has also bolstered the development of tourism and creative industries (e.g., Athens and Istanbul). Some metropolises that experienced massive urban sprawl have sometimes undertaken a spectacular urban revolution (e.g., converting a motorway into a water stream via the Cheonggyecheon project in Seoul).

82. Finally, effective governance can help ease the potential tension between large cities and central governments. Conflicts may arise when the development of large cities is perceived to deplete other regions or when large cities consider themselves as losers in the competition for development help from central governments. A key issue is therefore the extent to which large cities have a capacity to formulate their own policies within a national framework, for example via contractual arrangements that allow for better articulation between the cities’ own development strategies and national priorities (e.g., the Vancouver Agreement combined federal, provincial and municipal programmes to finance projects related with economic and social revitalisation in 2000 and 2005).

Dynamic, diversified rural areas

83. Whereas public policy can support large cities in promoting diverse knowledge-based activities and addressing congestion costs, differentiated policies can help smaller cities as well as rural areas to better exploit their own development potential. Past policies tended to adopt a redistributive compensation approach solely based on the fact that these regions typically lack the economies of agglomeration associated with strong urbanisation and suffer from longer distance to markets and lower skills endowments. However, 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 from urban to rural areas (e.g., France, UK) or from rural to rural areas (e.g., China). Some small and medium-sized cities were able to seize niche markets and to offer a more attractive living environment than congested urban agglomerations, while the widespread decline of agricultural employment across OECD countries has challenged rural areas to develop alternative sources of growth often based on urban-rural linkages. 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.

84. OECD countries often navigate between the two extremes of a broad rural policy (a sort of “grand plan” aiming at integrating all sectoral policies in an ideally coherent strategy, often unachievable in imperfect markets) and a narrow rural policy (a niche policy, frequently limited in scope and budget). Yet, a credible midway solution lies in “proofing” the impact of sectoral policies on rural areas and adapting the policy content to specific rural needs. This new approach entails shaping rural policy as a policy field broader than and distinct from agricultural policy, via the development of rural development plans (sometimes beyond those required by the EU for European countries) and the creation of specific inter-ministerial bodies in charge (e.g., Rural Policy Committee in Finland). However, administrative inertia and powerful lobbies may limit cross-sectoral integration. A policy may be labelled rural but remain agricultural in practice, especially when the responsibility for rural development is allocated to the Ministry of Agriculture which traditionally interacted with rural areas and – in the case of EU countries – has often been encouraged by the EU Common Agricultural Policy to hand out direct payments to farmers.

85. In order to overcome accessibility limits while valorising place-specific assets, rural policy needs to cut across several policy streams, including transport and ICT, public service delivery, and SME
development in rural tourism activities. 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., France, 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., tele-medicine 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 Siena, 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).

86. 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 policymaking process. Municipalities can decide to pool resources together by signing intermunicipal 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). Municipalities also find valuable partners in local development associations, social enterprises and non-profit organisations. The central government could support community-based initiatives based on local knowledge (e.g., “On the Ground” programme and Community Development Trusts in Scotland) and further decentralisation of responsibilities and resources (e.g., provinces in the Netherlands).
CHAPTER 2. EFFECTIVE PUBLIC INVESTMENT IN REGIONS: THE MULTI-LEVEL GOVERNANCE CHALLENGE

Introduction and main points

87. 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. This chapter discusses the regional aspect of the implementation of policies -- even the best-designed policies will fail in their objective if implementation goes awry. This discussion goes to the heart of the challenge of public investment for growth, avoiding waste.

88. The main findings are the following. Well targeted public investment in regions can generate growth but it requires strong co-ordination among actors that all contribute to effective policy implementation. Regional policies are shared responsibilities between central and sub national levels of government. A large part of capital investment is made by sub-national authorities, often on the basis of strategies negotiated with the central government that have both regional and national objectives. That is the reason why multi level governance is key to determining the effective implementation of regional development policy. Challenges arise because of the fiscal and knowledge gaps that exist between mutually interdependent levels of government. Addressing these challenges requires mechanisms that can differentiate among regional strategies in a coherent way. This can be done through a variety of tools: institutional decentralisation, fiscal dimensions, contracts for dialogue, co-ordination between local authorities, and performance evaluation. Among the variety of available instruments, there is no one fits all solution. When choosing multi-level governance arrangements, public authorities have to promote those which provide incentives for sub national capacity building.

Why is multi-level governance needed for effective regional development?

89. Sub-national governments are playing an increasing role for public investment and expenditure, reflecting the increased allocation of responsibilities at the sub-national level. The rationale for devolving more responsibilities to the sub-national level is that those 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. But precisely because they are closer to the ground, they are less able to take into account development strategies at the national level, and the potential for conflict between regional and national policy goals. In addition, the transfer of responsibilities is comparatively recent in some countries, hence there is a risk that sub-national governments implement agreed policies inefficiently. Hence central governments have increasingly focussed on the relevance, efficiency and effectiveness of public spending at sub national levels. This can be done through standards regulation for local public services and/or by using systems of performance indicators for measuring and monitoring sub national service delivery (Table 2.1).
Table 2.1. 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></td>
<td>• Number of passports, drivers licenses issued</td>
<td></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</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>• Disease-specific cost-effectiveness measures</td>
<td>Finland (hospitals)</td>
</tr>
<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 (e.g. youth)</td>
<td>Netherlands</td>
</tr>
<tr>
<td></td>
<td>• Number of different caregivers providing elder home care 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>


90. There is no single optimal level of decentralisation, since the sharing of competencies and its implementation remain country specific. However multi-level governance is always required for managing public policies in a decentralised context. Interdependencies between levels of government have 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/or 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 thus 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).

91. Managing relations between central and sub national governments is needed for two main objectives. At a minimum, citizens, wherever they are located, should be able to enjoy equal access to a basic set of public goods and services, either through sectoral policies or via income equalisation transfers. Regional policy should also enhance the competitiveness of regions. 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. In practice, “equity” and “efficiency” approaches are not necessarily contradictory but can be complementary (Box 2.1).

**Box 2.1. The efficiency-equity 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 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 écoles students are few in number, but and they receive far more public spending per student than for university students. The average results are lackluster. 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 that 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.
Differentiating regional strategies in a coherent way.

92. 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 (6 to 7 million inhabitants, OECD 2007 Competitive Cities) where they are outweighed by congestion costs. 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. On average nearly half of the OECD population lives in predominantly urban regions, and well over half in the Netherlands (85%), Belgium (83%) and the United Kingdom (70%). By contrast, in Ireland, Finland and Sweden, at least half of the population lives in predominately rural regions (Figure 2.1.). Proximity disparities are sometimes even stronger than urban vs. rural ones. (OECD, 2008, Economic Surveys France)

Figure 2.1. Distribution of population into predominantly urban, intermediate and rural regions; 2005

93. Another important aspect of regional difference, directly impacting on the cost of public services, is the distribution of elderly population within countries. While in Korea, Portugal, France, New Zealand, Japan and Ireland the concentration of elderly people is higher in the peripheral regions, in other countries like Poland, Belgium, the Slovak Republic and Hungary the share of elderly population seems to be higher where population is more concentrated, generally in urban regions. In 2005 the elderly dependency rate, i.e. the ratio
between retired people and economically active people, across OECD regions was higher in rural than in urban regions in most of the countries (see Figure 2.2.)

Figure 2.2. Elderly dependency rate in the country and in TL3 predominantly rural and urban regions; 2005

Source: OECD Regions at a Glance, 2009

94. 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 cooperation with private entities should be organised in order to enhance social capital local resources.

95. Regional development policies are operated in an uncertain environment, with a multiplicity of actors, private and public. As noted earlier, regional and local actors are often better able than central governments to design local solutions to local problems and to identify local opportunities for development strategies. However, central governments are key partners for supporting capacity building, for financial support, “fiscal gaps” and for orienting local development policies toward the maximisation of positive spillovers to the rest of the country. This can lead to asymmetry of information, “knowledge gaps” between levels of government (in particular between central and sub national ones), often represented by principal-agent types of situation and risks.

96. 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 risk taken and to contribute in building information accessible to other regions; Oates, 1999).

97. *Place-based strategies take place through two types of approaches:*

- National strategies focusing on specific territories: The differentiation of policies can reflect the specificities of different areas, especially urban vs. rural types of regions, but also mountains, islands, cross borders, protected, etc. territories;

- Regional strategies have to be tailored to regional characteristics. Regional development programmes have to support various regional innovation systems (see Chapter 1), various types of exploitation of natural and cultural resources, and various types of infrastructures and services investments.

98. *However, the greater the differentiation of place-based policies, the more challenging will be the coherence of regional policy.* Two types of benefits can emerge from coherence: in an *allocative* perspective, coherence enhances the efficiency of policy by avoiding contradictory public actions, duplication of resources, etc.; in a *dynamic* perspective, coherence 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. The following sections discuss a variety of national approaches regarding each dimension of multi-level governance: decision power, financial resources, arrangements for vertical coordination, arrangements for horizontal coordination, informational systems. In each case, the structure of incentives is highlighted.

**Accountable leaders and the degree of decentralisation**

*A variety of frameworks regarding the institutional allocation of competencies*

99. *There is a distinctive trend toward greater decentralisation in many OECD countries.* In the decade 1995-2005, the share of sub-national expenditure in total government expenditure grew from 31-33% (Figures 2.3 and 2.4). 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) 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 2.2).

100. *Paradoxically, the increase in sub-national competencies goes hand in hand with a greater dependency on central government for financial resources.* Indeed, the increase in sub-national expenditures was mostly covered by higher intergovernmental grants and partly by own sub-national governments (SCG) taxes SCGs have thus become more financially dependent on central government, and the growth of transfer systems has tied central and sub-central fiscal policy and outcomes more closely together.
Figure 2.3. Decentralisation in OECD countries
Share in general government revenues and expenditure, 2005

Source: OECD National Accounts database; Statistics Norway; Statistics Canada; US Bureau of Economic Analysis.

Figure 2.4. Decentralisation in OECD countries
Changes expressed in percentage points, 1995-2005

Source: OECD National Accounts database; Statistics Norway; Statistics Canada; US Bureau of Economic Analysis.
Box 2.2. 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).

The 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). Yet 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.

as substitutes but rather as complements (which can lead to duplication in public spending) as in France, United Kingdom, etc.

102. Although there is no ideal matrix for repartition of competencies across levels of government, some common trends across countries are noticeable. 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 2.2. However the weight given to each criteria is more historical and political than economic. Although a clear-cut allocation of competencies across levels of government is extremely complex to design, as many competencies are shared across levels of government, examples of EU countries show that (Dexia, 2005):

- “Environmental” responsibilities are very often at the local level (water, waste, roads, urban planning). The share of sub-national spending in this area in total government expenditure was 74.5% in 2005, is the most devolved competency, and involves major capital investments.

- Economic development, culture, tourism are often shared among levels of government, and devolved expenditure on these competencies has grown the fastest, from 41.8% of total government expenditure in 1995 to 46.8% in 2005.

- Education is frequently shared among levels of government. 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)

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Key messages:

- There is no unique decentralisation solution; consistency between different dimensions and between different levels of government, linked by “mutual dependence” relationships is more important than the allocation of competencies as the sole criteria for assessing decentralization.

- Regional development needs to involve private stakeholders there, and for that reason, and the risk of knowledge gaps, regional development should be shared with (elected) authorities at the regional level.
Financial resources...and the variety of financial instruments for different objectives

Sub national government (SCG) public spending

103. Although SCG spending has increased over the past decades, SCG spending shares and their evolution are not evenly distributed across policy areas or government functions (Figure 2.5) in OECD countries. 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, (which for the COFOG nomenclature means sickness and disability, old age, family and children, unemployment, housing…services), the public spending item with the highest increase, is strongly centralised, and relative spending growth has thus little impact at the sub central level in most countries.

104. The largest SCG spending increases concern general public services (administration) and economic affairs (COFOG nomenclature), where the latter comprise infrastructure and neighbourhood services (housing, community amenities). Spending patterns suggests that SCGs 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. 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 instance, sub national needs might increase since responsibilities such as education, childcare, elderly care and transportation infrastructure (all SCG 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 SCG public investment spending. (OECD Territorial Review, France, 2006).

Figure 2.5. Share of sub-central to total government expenditure, by main policy area

Note: percentages in brackets indicate the share of this function in total government expenditure, COFOG Nomenclature, 2005.
Taxes vs. grants for sub national resources

105. SCG have two main revenue sources: their own tax revenue and revenue from intergovernmental grants (Figure 2.6) (they might also benefit from fees and charges for which access to information is limited but which remain minor as compared to the other two sources of revenue) (OECD 2008, 1st paper Fiscal Network). 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 redistributive 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 SCG in OECD countries, the variety of national approaches to ensure fiscal equalisation, the extent of externalities from SCG policies, historical circumstances and a variety of political concerns (OECD, 2008 Second paper Fiscal Network). An additional element is that SCGs 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, apparently stronger 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 SCG (in delivering sub national public services) for attracting private investments.

Figure 2.6. Revenue composition of sub-central government, 2005
Types of grants

106. Central governments and sub national governments are in practice co-funders of 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 motivation is a part of the explanation of fiscal equalisation reforms in countries like Portugal or Switzerland). From the central government point of view, a variety of transfers can be allocated to SCGs (Figure 2.7.) for fulfilling the main functions associated with CG role: (2006 paper on intergovernmental transfers “journal of budgeting”):

- **Financing**: to enable sub national governments to finance a basic package of services for which they have competencies (or to reach imposed standards)

- **Subsidisation**: to compensate for spillover effects from SCG policies

- **Equalisation**: to allow SCG to provide their citizens with “similar” set of public services at a broadly “similar” tax burden.
Figure 2.7. Types of grants

Grants
- Non-earmarked
  - Mandatory
  - Discretionary
- Earmarked
  - Mandatory
  - Discretionary
  - General purpose grant
  - Block grant
  - Non-matching grant
  - Matching grant
  - Capital grants
  - Current grants

107. OECD countries adopt very different patterns for financing their SCG through transfers. This choice is not neutral since each solution presents pros and cons (Table 2.3).
Table 2.3. Grant revenue by type of grant, 2004
As percent of total grant revenue

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Source: Fiscal Network Database
Financing equalisation is different from financing regional development

108. The more that grants are close to “non earmarked” transfers, the more the SCG discretionary spending power will be important. On the other hand, earmarked grants preserve a clear central government role in the way transferred resources are used. The matching character of a grant allows for a more responsible behaviour from sub central governments. 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;

- Nevertheless, earmarked grants (in particular through co-funding programmes) can be relevant for:
  - Risk sharing projects;
  - Temporary cooperation projects;
  - In cases of SCG expenditures difficult to target and which need guidance from central to sub national decision-makers

- As far as regional development policy is concerned, earmarked grants are a good financial instrument for the CG willingness to support regional strategies and contribute to sub national capacity building.

109. Whatever its important characteristics and results (Box 2.3), 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 equalisation paper for the FN, 2007). 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 instance, where welfare costs heavily burden local finances, some SC governments have expressly asked the central government for earmarked grants to help finance regional development strategies.
Box 2.3. 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 110 and 1200 US$ 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 equalized, 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.

Source: Bloechliger and Charbit, 2008; Bloechliger, Merk et alii, WP n°4, Fiscal Network 2007

110. SCG are the main contributors to public investment, with near to 70% of public investment made by SCG on average in Europe (Figure 2.8). The central government’s role is increasingly a guide and a warrantor of national consistency in regional policy. Beyond central and sub-central government, the role of a third player needs to be explored: private actors and regional development.

Figure 2.8. Capital Expenditure by regional and local authorities; 1995-2004

Capital expenditure by regional and local authorities, 1995-2004

Source: Eurostat

Source: Dexia
**The case of PPP for sub national investment**

111. *An approach of growing importance to financing large public projects is that of public-private partnerships (PPPs).* PPPs are contractual agreements between a public agency and a private firm through different forms. (Box 2.4.). Through this agreement, the skills and assets of each sector (public and private) are shared in delivering 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 efficiency and effectiveness have increased.

<table>
<thead>
<tr>
<th>Box 2.4. Forms of public-private partnerships</th>
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<tr>
<td>Public-Private partnerships can take many forms, such as the following:</td>
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<td>• The private sector operates the facility for a fee. The public sector retains responsibility for capital costs.</td>
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<td>• The private sector leases or purchases the facility from the public sector, operates the facility, and charges user fees.</td>
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<tr>
<td>• 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.</td>
</tr>
<tr>
<td>• The private sector builds the required infrastructure, operates the facility for some specified period of time, and then transfers it to the government.</td>
</tr>
<tr>
<td>• The private sector builds and operates the facility and is responsible for capital financing. The public sector regulates and controls the operation.</td>
</tr>
<tr>
<td>• The private sector builds the infrastructure and then transfers ownership to the public sector.</td>
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</tbody>
</table>

*Source*: Kitchen (2005): 140

112. *At the same time there are certain risks, requiring appropriate safeguards to protect the public interest.* In particular, there are likely to be asymmetries of information and of commitment between the different parties of the agreements. These considerations have now to take into account more “inclusive” PPPs, to which the various local stakeholders of the development projects, profit and non-profit, may contribute. The private partners need to participate at as earlier 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 overall socio-economic benefits of 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 whether a certain one would be implemented with private participation. There is a high possibility that socio-economically unviable projects cannot produce positive results regardless of the project implementation type.
113. A cost benefit comparison of PPPs versus traditional procurement needs to be rigorously conducted, and PPPs should be subjected to at least the same scrutiny as traditional expenditures in the budget process. Local public authorities need guidance and, as far as is practicable, standardised processes for selecting and operating PPPs. This help does not only concern respect of competition regulations but also the steps to be followed to identify the best partner, evaluate the effectiveness of the PPP option, and ability to negotiate the contract and diffuse information to other local jurisdictions.

Key messages:

- Fiscal instruments need to be adapted to the objective. Own revenues from taxes reinforce sub national accountability. However, and whatever their amount which is often limited, the financial participation of higher levels of government is requested for warranting regional policies coherence.

- Transfers from central governments cannot be limited to equalisation purposes. Co-funding solutions by central and sub national actors have often to be selected for regional development programmes. This shared financing gain to be based on earmarked grants.

- From a general point of view, sub national resources must be consistent with allocated responsibilities.

Relevant strategies and dialogue between levels of government through contracts

114. It is clear that regional development policy is a shared responsibility among levels of government; for which co-funding mechanisms are required that differ from the central government support for income equalisation. There are two specific challenges in this context: what governance tools can both support the identification of relevant regional strategies and help solving inherent asymmetry of information among central and local partners, among public and private ones? 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.

115. A contract here refers to the bilateral agreements between central and sub national government concerning their mutual obligations, i.e.:

- An assignment of rights of decision among the parties (authority rule)
- A distribution of contributions (mutual duties, including financial commitments)
- Mechanisms guaranteeing the enforcement of their mutual promises.

116. There is a variety of contractual arrangements that can support dialogue and commitment among levels of government. A specific approach has been developed by the OECD for assessing the efficiency of the various contractual relationships between levels of government, which is based on the distinction between “transactional” and “relational” types of contracts (Box 2.5.).
Box 2.5. Typology of contractual arrangements among levels of government (OECD, 2007)

A contract between levels of government is any arrangement reorganising, along with the constitution, the rights and duties of government. 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 has no recourse to “vertical integration”. Consequently contractual choices are thinner than in the case of contracts in general and the logic of contracting is strongly influenced by the need to organise an unavoidable cooperation. Assessment of such contracts must not be attached to determining whether exit options are available but more oriented towards learning and seeking efficiency.

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

- **“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)

Because of the complexity of the policy domain, which involves many actor and issues, contracts on regional development are often of the “relational” type, though the distinction between the two types is not clear-cut. For example, relational contracts may be preceded by calls for tenders to reduce uncertainty, elicit information about possibilities, and help develop selection criteria (Box 2.6.). Relational contracts can also contain specific tasks to be handled by “transactional” contracts. Finally, mixes of both are seen as decentralisation takes place (Box 2.7)
Box 2.6. 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 seek 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 reapply 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.


118. **Mixes of “transactional” and “relational” types of contracts usually happen as decentralisation takes place**, as shown by the following country examples:

- **France**: the logic of contracting is to jointly manage policies in the frame of decentralisation reforms, in which the central government remains an essential partner to the sub national one. The Contrat de Projet Etat Region has been the major governance instrument for regional policy since the first decentralisation laws in the 80s. It has evolved accordingly with the growing capacities and competences of Regional Authorities.

- **Italy**: the logic is to empower sub national governments. Contracts aim at transferring responsibilities so as to train and make more accountable sub national governments. Italian contracts for regional development policy also concern essential services provision for regions where it is considered as needed.

- **Germany**: with the constitutional and fiscal federalism reforms in process, is in the middle of the road. Important initiative remains with higher levels of government for delegating tasks to lower ones without real negotiations. At the same time “contractual federalism” (Spahn in, Ahmad and Brosio eds 2008) through “joint tasks” mechanisms seem to be limited with the reform, which
aim to clarify tasks allocation and resources, as if clearer allocation would decrease interdependency in policies (Spain: the logic is to jointly run structural policies (despite the recent strong decentralisation, many policy domains require co-operation). Contracts are a way to manage these interdependencies and the strong antagonisms that characterise the implementation of decentralisation in Spain, towards more cooperative practices. As an illustration, the number of “convenios de colaboracion” (contracts for cooperation) signed has increased enormously over time, from only 14 in 1980 to approximately 800 in 2004 (as indicated by the “Registro Nacional de Convenios”, Ministerio des Administraciones Publicas). (Table 2.4)

- **Canada**: Contracts illustrate clear assignment of responsibility in a federal state. They allow for managing the unavoidable independencies in the cases where several policy domains (assigned among levels of government) have to be combined. Contracts are focused in terms of objectives and duration (even if they touch complex structural policies and are often renewed) (Box 2.7)
Table 2.4: Type of convenio with examples

<table>
<thead>
<tr>
<th>Type of convenio</th>
<th>Example of convenio</th>
<th>Responsibility of national government</th>
<th>Responsibility of AC</th>
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<tr>
<td>1) Supply or exchange of information</td>
<td>Database on drug surveillance</td>
<td>Fund the service with EUR 117 618.</td>
<td>Distribute cards to doctors to be used to notify drug effects. Collect the data and enter it into the database</td>
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<td>2) National funding of services specific to one AC</td>
<td>Special education for gifted students</td>
<td>Fund the programme with EUR 36 010.</td>
<td>Develop a special programme for gifted students. Fund it with EUR 56 466.</td>
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<tr>
<td>3) National funding of services of all the ACs</td>
<td>Shelter, integration and education support to immigrants</td>
<td>Fund the programme with EUR 130 000 000. Distribute the quantity among ACs. Approve specific projects jointly with each AC.</td>
<td>Present specific projects to be co-funded and implement them</td>
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<td>4) Supply of technical advice</td>
<td>Advice offices for firm creation</td>
<td>Supplies the technical design of the offices and the software that allows for the web management of all the permits required to create a firm. No financial commitment for the NG.</td>
<td>Create the offices and use them to inform and advise on firm creation. No concrete financial commitment in the agreement.</td>
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<td>5) Management assignment</td>
<td>Technical works to identify vegetal varieties</td>
<td>Pay EUR 95 000 in exchange of the work. The NG is the owner of the information and can use it for its own purposes (e.g., managing subsidies).</td>
<td>A specialised entity of the AC will perform the works needed to identify the species, varieties and geographical location.</td>
</tr>
<tr>
<td>6) Pooling of resources to fulfil common objectives</td>
<td>Health services for the military</td>
<td>The NG supplies some specialised treatments in the military hospitals to the general population.</td>
<td>The AC supplies general treatments to the military in ACs hospitals. The cost of these mutual services will be evaluated and netted out from time to time.</td>
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<tr>
<td>7) Transfer of assets</td>
<td>Cession of the use of part of buildings of the Monastery of San Jerónimo de Yuste</td>
<td>Use of part of the buildings that belong to state during a period of ten years. No financial commitment.</td>
<td>No financial commitment. The buildings are not rented.</td>
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<tr>
<td>8) Creation of an inter-governmental administrative forum</td>
<td>Creation of a joint customs office</td>
<td>Co-operate on the tasks necessary to create a unique procedure to declare imports and exports and pay the specific indirect tax of the Canary Islands. Participate in a bilateral commission and working groups. No financial commitments.</td>
<td>Co-operate on the tasks necessary to create this joint customs office. No financial commitments.</td>
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<tr>
<td>9) Creation of a common management entity</td>
<td>Consorcio Casa Árabe</td>
<td>Representation in the Consorcio Casa Árabe created to improve the relationship with the Arabic and Muslim world. Fund the Consorcio yearly; the contribution for 2005 is EUR 833 753.</td>
<td>Representation in the Consorcio Casa Árabe according to the rules of its Statute, included in an annex to the convenio.</td>
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Note: The convenios selected aim to be representative of those signed during 2005 in each of these categories in that they represent quite well the traits of the convenios included in each category. However, this does not mean that they are the most relevant qualitatively or quantitatively.

Source: MAP (2005), Convenios de Colaboración autorizados durante 2005, Análisis de contenidos, Ministerio de Administraciones Públicas, Subdirección General de Cooperación Autonómica ; OECD 2007 contracts
Box 2.7. 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 Columbia (regional level) and the City of Vancouver (municipal level) (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 has 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 coordinating the efforts of a wide range of governments 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 both based on individual partner existing authorization procedures for committing required funds and accountability to each own electorate 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 a priori the precise goals of the co-operation, and the wish to engage in a long term collaboration and coordination 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-party arrangements such as these can have in addressing complex issues requiring intervention, by all three orders of government in Canada.


119. **Vertical coordination often requires horizontal coordination between line ministries in charge of public policy fields, with an impact at the sub national level.** That is the case with the Contrat de Plan Etat Region (CPER) in France (now “Contrat de Projet Etat-Regions”). In the previous generation of CPER (2000-06) there were nearly 20 ministries participating, with different levels of contribution. 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. Coordination of the various ministries actions in regions is the responsibility of both the inter-ministerial role of the DIACT (Delegation Interministerielle 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 stakeholders of the contract (with the participation of their deconcentrated services in regions).

120. **Different national approaches address the issue of horizontal coordination among ministries for regional policy, but it is difficult to say which approach is superior** (Box 2.8). In most cases, coordination 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. Even in the case of countries which have created strong central authorities in charge of regional development – such as EU countries which have to manage large inflows of EU funding, in particular new member states, coordination across the various sectoral policies and the regional development one is difficult. For example, inter-ministerial coordination on regional development has improved in Poland with the creation of the Ministry of Regional Development in 2005, which is the managing authority for all operational programmes (including sectoral ones) (see table 2.5). However, coordination is difficult with other ministries, such as the ministry of infrastructure, and arbitration mechanisms are lacking (OECD Territorial Review of Poland, 2008).
Box 2.8. 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 coordinating the activities of sectoral ministries to full-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, 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 interministérielle 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 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.
Table 2.5. The case of Poland: managing authorities of regional development policy under the 2007-2013 National Strategic Reference Framework for the use of EU funding

<table>
<thead>
<tr>
<th>Operational Programmes (OP)</th>
<th>Managing authority</th>
<th>Number of intermediary institutions</th>
<th>Intermediary institutions of sector rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure and Environment</td>
<td>Ministry of Regional Development</td>
<td>6</td>
<td>28I</td>
</tr>
<tr>
<td></td>
<td>Minister in charge of transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of health</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of culture and national heritage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive Economy</td>
<td>Ministry of Regional Development</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Minister in charge of economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of science</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Capital</td>
<td>Ministry of Regional Development</td>
<td>21</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Minister in charge of social security</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of labour</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of education and upbringing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of higher education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of public administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minister in charge of health</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-government of voivodships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Poland</td>
<td>Ministry of Regional Development</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Regional Operational Programmes (16)</td>
<td>16 regions (Marshal Office)</td>
<td>13 institutions</td>
<td></td>
</tr>
<tr>
<td>OP Technical Assistance</td>
<td>Ministry of Regional Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Programmes European Territorial Co-operation</td>
<td>Ministry of Regional Development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


121. 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 of the fuzziness in the assignment of responsibilities which may sometimes generate overlap between levels of action and some other times leave policy gaps.
Contracts allow a customised management of interdependencies, useful in either unitary or federal contexts. In unitary states, contracts are used 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. Contracts therefore tend to be focused and of shorter term (often used for innovations in the management of joint policies).

Contracts are tools for dialogue, for experimenting and clarifying responsibilities and so for learning. They should be considered as laboratories for best practices. In case of success they can lead to replication of similar agreements with other regions or between the same partners on other topics. They may even result in constitutional clarifications of the respective roles of each party.

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.

There is no “optimal” contract and a one-size-fits-all approach to assessment of contractual relationships is not appropriate. Assessment must be adapted to the characteristics of the contractual environment and purpose of the contractual arrangement.

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 the French case);
- ministries in central government in charge can be reluctant to give up their prerogatives (see below, political economy of reforms challenges)
- 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

Reaching coherence of regional policy making through vertical contracts must thus be accompanied by horizontal arrangements among ministries intervening in regional development, because of the requested multi-sectoral approach. Horizontal coordination is needed to attain three main objectives:

- Being more efficient (short-term)
  - Decreasing public spending while improving the effectiveness of its results (avoiding redundancies and overlap; looking for economies of scale; etc.)

- Building cooperative partnership (medium-term)
  - Solving asymmetries of information in cases of interdependency in policy making

- Building capacities (long-term)
- Capacities for addressing new types of issues

**Key messages:**

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 as 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 coordination arrangements among ministries intervening in regional development, because of the multi-sectoral nature of the policy.

**Relevant scale for the supply of local public infrastructures, services and inter municipal coordination**

123. Both economic efficiency and improved provision of local public services are looked after with decentralisation, but challenges are numerous. Increasing decentralisation from the central to sub central levels of government 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. Reforming sub national public organization meets three major difficulties, however:

- The measurement of economies of scale in local public services and identifying the optimal size of sub central jurisdictions that will allow governments to capture the benefits associated with a higher level of service delivery.

- The strategies that help translate economies of scale and scope into less costly and/or better public services, such as cooperation among sub central governments or even amalgamations.

- The evaluation of various approaches experienced by governments to increase the efficiency of public service delivery through reorganizing their production. Merging sub central governments and promoting their cooperation are among the most frequent, and many methods have been tried.

**Economies of scale and evaluation**

124. Territorial fragmentation can jeopardize 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 (Figure 2.9) (OECD 2007 Pari pour la Croissance). Besides, empirical studies on the cost of public services conducted in several countries show a U-shaped curve. According to this 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 is to inverse 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 with time 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 mostly very heterogeneous results. The size would be 150 000 inhabitants in Japan, between 10 to 50 000 in Canada, from 20 to 40 000 in Denmark, between 10 000 and 20 000 in Switzerland, around 10 000 in Norway, against around 5 000 in Spain. The variety of these results does not make them very operational.

125. In practice, there is limited evidence regarding economies of scale in local government service provision. In a survey of studies from the U.S. and the U.K. (Byrnes and Dollery, 2002), 8% of studies find evidence of economies of scale, 24% find evidence of diseconomies of scale, 29% find evidence of both economies and diseconomies of scale, and the bulk of studies (39%) find evidence of neither. The authors conclude that it is uncertain whether economies of scale exist in local government service provision. This uncertainty may be due in part to weaknesses of the studies, which include choice of variables for analysis, focus on the analysis on the short-run and a lack of differentiation between “municipalities level” effects and “plant level” effects (meaning sector specific units of service within municipalities such as schools or hospitals. Similarly, the findings of a more recent Danish study that revealed economies of scale in local administration may be biased because of the choice of data (references to various Danish studies in Bercy workshop proceedings).

Figure 2.9. Average size of municipalities in selected European countries


126. There are also a few studies which assess costs and economies of scale post-amalgamation. Again, results are mixed. A recent Danish study found that municipal amalgamations on the island of Bornholm did produce savings in the short run through the closure of small schools and administrative restructuring, but that those savings were transformed into increases in quality rather than “cashed in” as budget savings. But an older longitudinal Finnish study of municipalities found that spending increased
faster over a period of ten years in cases of amalgamations. Similar results are observed in France when inter-municipal cooperation is assessed. The first impact is an increase of spending which usually reflects investments made possible by co-funding through inter-municipal agreements, in particular for responding to more demanding environmental standards. As a consequence, the improved quality of public services is also often mentioned as a positive result (OECD, Territorial review of France, 2006).

Trade-off between competition and cooperation

Trade-off between competition and cooperation

127. A key issue in the governance of regional development is the trade-off between competition and coordination 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 adaption 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 to be ignored if there is not some form of coordination or cooperation. In general, there will be more need for regional coordination of public goods and services when these are subject to externalities (such as transport); more competition would make sense when most externalities are already internalized or when mechanisms are in place to internalize. This is particularly relevant for metropolitan areas as their density will usually imply more externalities. For this reason, several municipal areas have intra-metropolitan equalizations schemes (Box 2.9).

Box 2.9. Metropolitan fiscal equalisation in Tokyo, Seoul, Istanbul and Copenhagen

Tokyo is composed of 23 special wards, or tokubetsuku, which are roughly equivalent to cities in their fiscal and administrative powers. The scale of the current equalisation system is quite significant, totalling JPY 1.48 trillion (about EUR 11 billion) in 2003. The system 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 standardized costs for each ward. Funds are allocated to the individual ward in the event that their costs exceed their revenues. In recent years, the wards have sought to expand their scope of responsibilities and thus their share of the funds, but the metropolitan administration argues that area-wide provision of such services as sewerage and fire protection offer important economies of scale.

Significant grants flow from Seoul to its autonomous districts (gu). Seoul’s total spending on support to the districts totals KRW 2 000 billion (around EUR 1.7 billion). This is 14% of total spending of the Seoul Metropolitan Government. The grants are allocated on the basis of a formula that seeks to fill the vertical gap among the district, which is quite pronounced because fiscal capacity varies greatly among them. 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 on social development costs such as health care, environmental enhancement and social security. The district spends 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. Instead of providing district municipalities with additional means for providing services, the financial scheme serves the metropolitan municipality of Istanbul. District municipalities in Istanbul have to transfer 35% of their tax share to Istanbul metropolitan municipality. This is 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 find that they do not have enough left for their own needs.

There is an inter-municipal equalization 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 shall contribute 27% to the equalization scheme. The definitions of
expenditure and tax receipts are similar as in the national scheme: for the estimation of the tax revenues, the municipal tax base is used applying an average tax rate. The expenditure estimations are made using a complex of two different indicators: demographic ones and socio-economic factors, which make 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 €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.


Forms of horizontal cooperation

128. Achieving gains through horizontal collaboration takes two basic forms: 1) municipal integration by merger or by one municipality taking over another and 2) cooperative arrangements involving agreement on the joint supply of public services covering one or more sectors. Within these two categories of collaboration there is a continuum of relationships.

129. The arguments for amalgamation generally have to do with efficiency. Efficiency gains can be achieved in theory at the local level through amalgamation of municipalities which internalizes spill-over 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 extract 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.

130. While co-operation may be viewed as a second-best choice, a variety of goals can nevertheless be realised. For example, while amalgamation translates into economies of scale at the municipal level, 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). Fiscal efficiency can also be improved. Municipalities may agree to a common tax rate, as is the case 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 specialize in specific services and co-operate to access others. Finally, co-operation may allow municipalities to achieve multiple objectives because its flexibility allows for the incorporation of more actors than amalgamation.

Policies regarding municipal coordination

131. Most of OECD countries are concerned by these questions of a relevant scale for local public services and look to put in place policies that enable them to gain not only in efficiency but also in quality. A first approach consists of recentralizing 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: specialization (notably in Switzerland) or joint production. In
Switzerland, certain cantons do not provide certain public services they are in charge of (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 2.10). They sometimes target a precise size and contain incentive measures that are more of less voluntary. In contrast, in France, inter-communal grants are considered as an opportunity for municipalities, non associated with strictly evaluated constraints, and therefore create a real disincentive to the merger of municipalities (Box 2.11).

Box 2.10. Examples of mergers policies: the case of Denmark and Japan

**Denmark**

On January 1, 2007, the number of Danish municipalities was reduced from 270 to 98, with an average size of 56,000 inhabitants. At the same time, Denmark eliminated 14 counties in lieu of five regions. These mergers are the culmination of a four year reform process. After a series of public hearings and discussions with municipalities, in the second half of 2004 all Danish municipalities were asked to select the neighboring municipalities with which they wanted to merge. The threshold size for the new municipalities was set at 20,000 inhabitants. In cases where municipalities wanted remain below 20,000 inhabitants they had to enter binding agreements with another municipality so that the combined number of inhabitants was at least 30,000 people. The deadline for selecting partner municipalities was January 1, 2005, two years prior to the actual mergers. Ultimately, out of the 98 new municipalities only seven had fewer than 20,000 inhabitants (and thus be engaged in binding partnerships). Thirty-two municipalities (located largely around Copenhagen) remain the same as in the past because their total inhabitants exceeded 20,000 and they were thus 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. Although municipal amalgamations were voluntary in the sense the municipalities were able to choose their partners, parliamentary intervention was threatened for 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 the 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. In addition to receiving new responsibilities, municipalities will also transfer some responsibilities to the national level, such as the responsibility for assessing and administering taxes.

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.

**Municipal mergers - the case of Japan**

Japan is a unitary country with a two-tiered sub-national system comprising 47 prefectures and over 1,800 municipalities. The country has experienced three periods of major municipal mergers since the late 19th century. During the Meiji era, the number of municipalities dropped from 71,314 in 1889 into over 15,859 in 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 decentralization of government, 2) address demographic shifts and the ageing population in particular, 3) to encourage mobility, and 4) to address serious fiscal constraints at the central and sub-central levels. In fact, concerns regarding sub-central efficiency are particularly acute in Japan, where the fiscal situation is severe. The total long-term debt of both central and sub-central government totals approximately 775 trillion yen (approx. 7 trillion USD), with the portion held by local government expected to exceed 204 trillion yen at the end of 2006. Municipal mergers are seen as a way to enhance the efficiency
of local government.

The recent round of mergers was voluntary. The decision to amalgamate was taken largely at the local level. The central government could not force municipalities to merge, but it did remove obstacles to amalgamation (assembly members seats could be maintained, the tax rates could remain the same, new organisational structures could be used to enhance local representation in municipal affairs) and offered financial incentives to local governments to merge (maintaining the local allocation tax for ten years, offering merger grants to projects contained in each of the municipal merger plans (on average 100 million yen per municipality participant), providing preferential treatment on local municipality bond). 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 March 31, 2005 (the expiration of the Special Merger Law), when localities would no longer be eligible for national subsidies for amalgamation.

Japan encountered a variety of challenges during the last merger period. The four symbolic problems represented the worries of communities about worse treatment of their affairs: 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 created an anti-municipal merger atmosphere 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 1.8 trillion JPY (16 billion USD) 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.

Box 2.11. Municipal co-operation – the case of France

In contrast to OECD countries which have pursued policies of municipal amalgamation, France is characterised by voluntary co-operation at the local level. It has more than 36,000 communes (the basic unit of local governance). Although France has resisted municipal mergers, the need for local co-operation is clear. As such, the communes are united by approximately 19,000 inter-communal structures (which includes 2525 “public establishment for inter-communal co-operation” (EPCI) and other forms of syndicates) aimed specifically at facilitating horizontal co-operation.

The current system of inter-communal structures was first established in 1992 and reformed in 1999 such that there are now three main types of supra-communal structures: communities of communes (groupings of small rural communes), “agglomeration” communities (groups of 50,000 inhabitants subject to a single business tax), and the urban communities (groupings of 500,000 inhabitants or more). “Single purpose inter-communal associations” (“syndicates”) first established in 1890 and multi-purpose syndicates which date back to 1959 are also still in existence.

Each grouping of communes constitutes an EPCI. The EPCCs assume limited, specialised, and exclusive powers transferred to them by member communes. Unlike the communes themselves, the EPCI is not governed by elected officials but by delegates of municipal councils. Although the EPCI are created by the communes directly, there are two notable roles for the central government. First, EPCCs must be approved by the State in order to exist legally. Second, to encourage municipalities to form an EPCI, the central government provides a basic grant plus an “inter-communality grant” to those communes that accept a single business tax, which is established to preclude competition on tax rates among participating municipalities in order to attract business. EPCCs draw on two sources of financial resources: budgetary contributions from member communes (for the syndicates) and/or their own tax revenues (for the EPCCs).

There are some indications that inter-communal co-operation has produced efficiency gains. On the one hand, some outdated governance structure disappeared after the 1999 reforms and communes tend to collaborate in areas such as public works, which are likely to exhibit economies of scale. On the other hand, growth in inter-communal spending has neither been accompanied by a decline in communal spending, nor by important transfers of personnel from communes to communities and is associated with a rise in payroll costs and local tax increases, and the presence of communal and inter-communal governance structure results in overlaps and extra costs. Overall, measuring the efficiency and effectiveness of municipal co-operation is difficult in France, as there is no culture or institutional structure for evaluation of public policies in this regard (see Cour des Comptes (2005) L’intercommunalité en France, Rapport au Président de la République, novembre (www.ccomptes.fr/cour-des-comptes/publications/rapports/intercommunalite/rapport.pdf)

In addition to this managerial approach of co-operation among municipalities there is also a determination to develop what are known as “project territories” – the “pays,” the clear purpose of which is to transcend administrative boundaries so that territorial strategies can be formulated. The underlying logic of the “pays” is to base territorial action on synergies between willing local players and at the same time to match the boundaries for these unifying projects to functional areas. When co-operation and local dynamics work well, these “pays” can offer a genuine means of unblocking the system’s complexities through local action, especially when facilitated by the competences of local actors. They do however appear to suffer from structural difficulties in terms of resources at their disposal.


132. The extent of inter-municipal co-ordination is affected by the type of policies employed by the central government to facilitate mergers or co-operation. It can mandate mergers, provide financial incentives for mergers or co-operation, extend legal authority to inter-municipal structures, and facilitate information sharing among municipalities. In some instances, central government policies to encourage actions in one area (such as co-operation) may be a disincentive to act in another (amalgamation). There appears to be a variety of national policies related to the obligation to merge and related to “optimal” size which ranges from voluntary mergers in the face of “disincentives” to mandatory mergers with a specific target size. In this case “disincentives” refer to the unintended consequences of other policy actions which have the effect of discouraging municipalities from merging. Examples of the types of national policies are provided in Table 2.6.
### Table 2.6. Typology of national municipal merger policies

<table>
<thead>
<tr>
<th>Merger policy</th>
<th>Optimal size</th>
<th>Target size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary (disincentives)</td>
<td>Austria</td>
<td>France</td>
</tr>
<tr>
<td>Voluntary (no policy)</td>
<td>Australia</td>
<td>Norway (current) Spain Switzerland Turkey United Kingdom United States</td>
</tr>
<tr>
<td>Voluntary (incentives)</td>
<td>Finland</td>
<td>Japan (Heisei) Japan (Showa)</td>
</tr>
<tr>
<td>Mandatory</td>
<td>Denmark(1)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** (1) Denmark has been placed in this category with respect to the obligation to merge. While recent mergers were based on voluntary decisions by municipal councils, they occurred under threat of parliamentary intervention. However, local authorities decided with whom to merge.


133. *A multi-level governance framework is by nature complex.* At the one hand it appears inevitable that this framework is complex, since sub-national governments have different functions that have different “optimal” scales, so it can quickly become messy. At the same time, this complexity might be difficult to change considering the interests of different actors to keep their power to block. Sometimes, the most pro-active approaches to challenges seem to not reform the institutions but formulate a highly profiles common agenda. For example, the Randstad in the Netherlands (which consists of the four largest cities: Amsterdam, Rotterdam, The Hague, Utrecht, and several other smaller cities) has decided to produce a Randstad urgency program, with actions to be taken in the short and longer run. Key themes in this Randstad agenda are accessibility, economic dynamism, quality of life and sustainability. This Randstad program of the national government stresses the joint responsibility for implementation of the actions. Instead of trying to change government structures, such as creating a Randstad province, it aims at finding governance partnerships that will be able to achieve results. A new way of creating political commitment for implementation is organized by proposing responsible duo’s per project. These duos consist of one central government minister or state secretary and one regional politician. These duos are made responsible for the progress on the particular project. There are 33 projects formulated, for which funds were made available. A Minister for the Randstad has been appointed that will hold the 33 duo’s accountable for the progress on their projects.

### Urban and rural considerations

134. 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.

**Co-ordination of municipalities in urban areas**

135. *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 overcome the combined pressure of metropolitan fiscal fragmentation, in some cases off-loading certain responsibilities and limited powers to the municipal level. Another objective is to rebalance population growth and patterns of social structure within metropolitan regions. Pro-amalgamationists contend that this formula can reduce duplication, produce economies of scale and scope for service provision, improve accountability, enable a more equitable sharing of the burden of taxation, and contribute to improved spatial planning capacity. 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 in 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).

However, mergers in a metropolitan context can be challenging because it is difficult to achieve a perfect match between functional and administrative boundaries because functional areas evolve constantly in time and space. For instance, the extent of urban sprawl in Korea is such that simply enlarging the perimeter of the metropolitan city by annexing neighbourhood communities is no longer a sustainable policy (OECD, 2001 and OECD, 2004b). In this context, one mechanism for horizontal governance that is similar to mergers but does not require the complete amalgamation of municipalities is metropolitan government.

Metropolitan government is based on governance at a functional economic area level. It assumes some decision-making power at the regional level distinct and autonomous from either central, large regional or local government. It is built around cross-sectoral competencies and competence in areas that have a metropolitan logic, such as transport, investment promotion, water supply, etc. The model assumes some logical predominance of functional area provision of goods and services over provision according to administrative boundaries. This assumption is based on arguments about the economies of scale generated by larger, unified service delivery areas, better equalisation of costs across the entire metropolitan region, and more effective strategic planning and integration of sectoral policies.

In addition to mergers and metropolitan government, metropolitan areas can also consider a variety of co-operation mechanisms. This includes cooperative arrangements through inter-municipal joint authorities whose main functions generally include transport, urban planning or economic development, as well as informal co-ordination mechanisms such as platforms, associations or strategic planning partnerships. In polycentric metropolitan areas such informal co-ordination is not uncommon. Bottom-up initiatives involving municipal governments, as well as other public and private actors, result in partnerships without formal decision-making powers, but which can influence decision-making and implementation processes. The key objectives followed by these governance partnerships are usually strategic development, project orientation, networking and advocacy. Many cities have placed greater emphasis on voluntary instruments for co-operation and even the few examples of strong metropolitan governance through metropolitan governments and amalgamated cities coexist with other forms of network arrangements.

Coordination 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. Unexploited economies of scale closely relate to the notion of critical mass, meaning the minimal combination of human capital, social capital, infrastructure, and natural or human-created amenities to trigger a development process. 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 critical level of resources. In this context, small municipal authorities often seek 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.

140. **Pooling resources and achieving economies of scale** require an adequate spatial organisation that gives reality to the 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, skills and infrastructure. The size of the territory and number of co-operating municipalities are also variable and necessarily linked to population density. 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” in France vary in population range by a factor of one to five, but most consist of less than 30,000 inhabitants, albeit these groupings are unique to the French context. In practice, the spatial characteristics of these groupings vary widely across OECD countries.

141. 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 which based on socio-economic indicators combined with other spatial indicators through the use of Geographic Information Systems (GIS).

142. 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. There are still some agreements for the joint provision of public services that cannot be set up between rural communes at a great distance from each other. 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 utilise these skills in different ways.
Key messages:

- 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. Issues such as standardisation of services, strategic alliances for development, financial constraints, community life and equity should rather 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 cooperative arrangements shift power away from locally elected officials to civil servants (e.g. Finland, France) or elected officials of other municipalities (considered by Denmark).

- In addition, merging competitive municipalities may lead to 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 as regards 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 cooperative arrangements which serve largely to attract central government funding, but do not function to maximize efficiency or quality of local government services.

Evaluation, performance indicators systems and incentives… for building capacities at the sub national level

Sub national capacities for regional development policies

143. 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. Sub-national capacity will depend on local official’s qualifications and organisational aptitudes, and their ability to evaluate results, interact with private and public stakeholders and contribute to the design and the 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 alii, 2003). Important risks arising from interaction with local businesses, of costly renegotiation and of capture, must be underlined (Box 2.12). One possible solution is a greater participatory approach including citizens into the policy-making process, as well as institutionalisation of “civil society” representatives, through specific bodies (e.g. the Conseils
economiques et sociaux – régionaux et national - in France). Strong external financial controllers are also desirable.

**Box 2.12. Capacity for interacting with private businesses for long term investment and strategies**

As far as public-private partnerships (PPPs) are concerned, and 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 (see UK evolution of practices with central agency to support sub-national governments; regional effort in Australia, at the States level to share information and provide guidance). However, "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 not involve co-financing already planned investments in infrastructure but rather, at an upstream level, defining the appropriate strategy for long term development. In such cases, sub-national governments are confronted with a trade-off between being connected and gaining in knowledge for regional strategy thanks to dialogue with local firms and being lobbied or even captured for engaging into 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 (see ex of Yucatan infrastructure Council, OECD 2007 Yucatan). Addressing this risk needs specific abilities for anticipation of long term results of short term decisions as well as 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 possible contract with those companies about the respect of "long term presence" clauses).

144. **These aptitudes are also conditioned by the level of sub national authority (local vs. regional) and their size.** Hence central government need to adopt a series of multi-level governance tools which constitute incentives for enhancing sub-national capacity. Some important approaches concerning the evaluation of the performance of sub-national governments and its influence on sub national capacity building are presented below.

**Sub national capacity building strategies**

145. **Capacity development needs obviously vary with the pre-existing levels of public administration infrastructure.** In particular, where sub national governments or related institutions must be created or have historically a limited role, capacity building needs will be greater but starting with a clean slate could expedite matters. While transferring responsibility to sub-national governments may oblige them to build capacity rapidly --“learning by doing”-- some governments prefer a more gradual approach where first there is a temporary deconcentration of responsibilities until sub-national authorities demonstrate their capacity to assume these tasks on a more permanent basis (see OECD Territorial Review of Chile). Some countries have adopted asymmetric decentralisation options. This is the case of Sweden, where a few regions elect their regional councils, while the rest of the territory only has deconcentrated country administrative boards.

146. **The central government’s concern with sub national level of capacities exists whatever the constitutional nature of the country.** It might be different for federal and unitary countries, since the central government would have less possibility for influencing sub-national levels in federal systems. But this is not necessarily the case in practice (see also MLG and sub national capacity building symposium of the PGC, Oct 2008). Whatever the constitutional context, sub national capacities also concern human resources management, budget and regulatory dimensions (Box 2.13).
Box 2.13. Instruments for building staff capacities at sub-national level

Most countries are looking for a trade-off between giving managerial autonomy to sub-national governments and keeping a certain degree of control and coherence over HRM systems at sub-national levels, both to help building local capacities and to avoid large heterogeneity in HRM systems and local performances. However, the right balance is not easy to find, as too much involvement will discourage local governments from learning; and a lack of involvement can increase disparities across managerial capacities between rich and poor regions. Overall, central governments tend to keep a significant role in HRM management across levels of government in terms (Table 1.X). (see table 1.X and 1.X; Anne Evans).

<table>
<thead>
<tr>
<th>Largely centralised system directed at the national level, and very little autonomy</th>
<th>Mixed picture in terms of discretions of HRM authority. While there is guidance from the national/federal level for conditions of recruitment/dismissal…</th>
<th>Large discretions for the sub-national levels for all domains in HRM authorities</th>
</tr>
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<tbody>
<tr>
<td>… there is some discretion for career management or profile of skills, but less for establishment of salaries</td>
<td>… there is some discretion for the establishment of salaries, but less for career management</td>
<td>… there is some discretion both for profile of skills/career management and for the establishment of salaries</td>
</tr>
</tbody>
</table>

| Slovakia | Czech Republic* | Hungary | Korea | Portugal* | Spain | UK | Netherlands | Norway | Australia | Germany* | USA |

Source: 2006 OECD HRM survey * Recent trends towards more autonomy

Further improvement in local capacities can come from:

- **Enhancing staff mobility** (both nationally between central and local governments, and internationally like with “Interchange Canada” national programme);

- **Developing training programmes and focusing training programmes on practical skills** (to facilitate day-to-day work on the planning and operational implementation of development strategies); In Mexico for example the central government has provided numerous hands-on and distance learning courses for sub-national actors;

- **Introducing performance management systems to better monitor individual and team performances** (The UK has developed ambitious approach to monitor performance management at the central government level, but also across local governments, through ‘capability reviews’).

Learning processes at the sub-national level have to include budgetary and regulatory dimensions. Budgeting process requires coordination of budget procedures across levels of government, multi-year budgeting, transparency and oversight, budget rules for current and capital items, etc.

Heavy regulatory burden and lengthy administrative procedures are major obstacles for building local capacities and developing bottom-up approaches of development. They can in particular slow public procurement.
Performance indicators systems

147. In order to be able to select, influence and monitor the adoption of efficient and effective implementation of regional policies, information about factors behind success as well as failure stories is required. However, the evaluation of 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 attribute changes in outcomes to programmes activities, remains limited in practice (Chapter 1 throws some light on this issue). Because of limited availability of information of that kind many countries have adopted indicators systems for assessing performance, especially of the sub-national ones.

148. *Indicators inform actors at different levels of government, helping them to achieve programmes objectives.* Indicator systems contribute to create a common frame of reference for dialogue about regional policy and so creating common knowledge. Indicator systems also promote learning and orient stakeholders toward 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 promoting 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 2.14) has led to a better identification of benefits and “costs” attached to their implementation.
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 that aimed to provoke 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, while it was in effect 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 modernisation of public administration. This reserve, which set aside 6% of a 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 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 3-, 6-, and 9-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 (OECD 2009) but have limited feedback effect on decision making. Their main impacts rely on their ability to reinforce linkages among regional development policy stakeholders (at different levels of government) and their contribution to learning and capacity building (Box 2.15).
First of all they allow for monitoring policy implementation. All cases studied demonstrate evidence that indicator systems are used to monitor 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 de-commitment rule and the Mid-Term Review process. The former worked to ensure that funds were spent on-time as committed, while the latter key mechanisms for ensuring that programme implementation stays on-track: the de-commitment rule and the Mid-Systems are used to monitor the implementation of policies and programmes. The EU case highlights the value of two

Box 2.15. Performance indicators systems advantages

First of all they allow for monitoring policy implementation. All cases studied demonstrate evidence that indicator systems are used to monitor 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 de-commitment 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 if the process of policy implementation is characterized 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. The cases also demonstrate how performance indicator systems contribute to making public policy more transparent and increasing accountability. 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 improving relations among levels of government. The performance indicator systems reviewed also proved to be useful to improve 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.

Indicators systems have a limited utility in selecting policy strategies and actors as well as determining resource allocation. In principle, performance indicator systems can produce information for making relevant strategic decisions, re-orienting policies, and making budget decisions. An example emerges from the case of the US EDA. First there is link between context indicators and project implementation, albeit not a strong one. Context indicators are used in the formulation of the Comprehensive Economic Development Strategy (CEDS) by regional actors, a prerequisite for receiving EDA funds. Projects implemented in the region should be consistent with the CEDS. Second, there is a moderate linkage between outcomes monitored and project selection. Specifically, some of information provided by prospective beneficiaries (e.g. anticipated job creation) is linked to performance indicators monitored over time. Overall, the case studies suggest limited feedback on decision making. This is consistent other OECD research on indicator systems (Mizell, 2008) and with the fact that multiple sources of information are generally used to make such decisions. Indicator systems tend to provide monitoring information, whereas evaluation data are often needed to make concrete decisions in these areas.

Learning, adjusting, and improving. 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 provoke 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 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.** While there are good practices to be followed and pitfalls to avoid, it becomes clear that each country’s objectives – both in terms of policy and in terms of monitoring arrangements – shape the approach that should be taken;

- In general, 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. The systems must be sufficiently flexible to accommodate user feedback, as well as policy and programming changes.

- Second, 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.

- A third lesson is that partnership between central and sub-central levels of government is crucial if an indicator system is to be valuable for regional policy stakeholders. If the objective of monitoring is not just to control, but to build co-operation and promote learning, then stakeholders must be brought to the table, and their views and feedback taken into account. 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.

- Fourth, regional development policy produces outcomes that materialise over an extended period of time. The case studies reveal a move toward 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.

- Fifth, 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.
Key messages:

- Strategies for building local capacities are complex and mainly based on cooperative 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 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

151. There is no “one fits all” multi-level governance (both in terms of decentralisation structure and in terms of arrangements between levels of government”). Reforming Regional Policies towards more effective arrangements meet a variety of obstacles (see examples in OECD 2007, Strategic Assessment, Rome). Possible solutions for addressing the political economy aspects of these reforms processes have to be shared among countries, in order to identify key factors behind success stories. Targets of the reforms as well as processes for reforming have to allow a great differentiation of regional paths…into a coherent way, not just in a static perspective but also for the future. New ambitions for regional policy will have to encompass their contribution for addressing global challenges like environmental and demographic ones.

152. As far as multi level governance is concerned, six dimensions might be recommended for reaching such 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, decision-making assignments and methods that are clear and transparent, information flows that are shared and unimpeded, and a mechanism for cooperation among actors;

- **Planning and implementation:** Planning processes that are participatory, policy actions that are aligned with regional policy goals, mutually reinforcing, inter-sectoral, and coordinated 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 objectiveness, and promote co-operation and credible commitments; and

- **Evaluation:** The infrastructure for and implementation of ongoing monitoring and evaluation in order to assess and adjust policies and programmes.
As previously, the charts sometimes exclude very rich capital city regions.

It is possible that the per capita incomes of capital city regions are overstated. Capital cities are often the biggest in the country, and workers commute there from surrounding regions. Also, many firms have their headquarters in the capital city, and report their earnings there, wherever they arose.


This contrasts with the Province of the Western Cape where 45% of traffic fatalities killed pedestrians (Provincial Government of the Western Cape Department of Transport and Public Works, 2004).

In particular, car-dependent suburbs began to form outside the original city centre during the 1960s and 1970s, zoned exclusively for specific racial groups. Large numbers of the city’s coloured population were relocated from functionally integrated and mixed-race inner-city neighbourhoods to new “super-townships” on the urban periphery that were distant from almost all existing employment opportunities, and in which commercial activities were outlawed. Such spatial development, characterised by a fragmentation of nodes of economic activities, is not conducive to inter-firm networks and agglomeration economies.


Aggregating regions GDP figures in often cases do not equate to the national figures due to commuting flows distorting regional GDP data and offshore activity accounted for in the national figures but not attributed to any region. The contribution of each region to national growth rates depends on (i) the regional growth rate and the (ii) size of the regional economy i.e. its GDP share.

It is said to be a convergence pattern conditioned by the other explanatory variables in the model.

Nevertheless, transport infrastructure remains a major policy objective with the 2007-2013 EU policy, and is the most important objective in many countries.

Poland is crossed by four out of the ten pan-European transport corridors, defined in 1994 and 1997 as routes in central and eastern Europe requiring major investment over the following 10 to 15 years. To this end, a set of trans-European transport networks (TEN-T) for providing high-speed, long-distance routes for moving people and freight throughout Europe was defined. Then, 30 additional priority projects were identified in 2003 to be achieved by 2020, based on co-ordinated improvements to primary roads, railways, airports, seaports, inland waterways, inland ports and traffic-management systems.


Casen Survey 2006.

The SIMCE test consists of an annual national examination of student performance in 4th, 8th and 10th grades. Testing started in 1987.

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

Productivity can also rise if the capital intensity of production rises, but there are limits: the marginal productivity of physical capital is estimated to be low in OECD countries [REF].