OECD Regional Outlook

BUILDING RESILIENT REGIONS FOR STRONGER ECONOMIES

2011

OECD

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Foreword

The central concern of this OECD Regional Outlook *is to understand how regional policies can contribute to aggregate performance, in terms not only of economic growth, but of a broader development agenda as well, integrating equity and environmental objectives. Building stronger, fairer and cleaner OECD regions is a particularly salient issue in the wake of the recent crisis, as OECD policy makers seek to sustain a still uncertain recovery against a backdrop of fiscal consolidation and, in many economies, limited room for manoeuvre in monetary policy. It also highlights the dangers of overlooking the regional dimension, particularly in the field of public finance. Sub-national governments' success in managing public investment is likely to be a key factor in determining the strength of the recovery in many places. At the same time, the impact of the crisis on sub-national public budgets represents an often under-appreciated challenge to fiscal health and economic performance in some countries.*

Building on the quantitative data and qualitative evidence presented in the 2011 edition of OECD Regions at a Glance, *the analysis presented in the pages that follow points to the limits of one-size-fits-all economy-wide policies for generating growth in the current environment. It suggests that a more differentiated approach, reflecting the specificities of OECD regions, offers a better way of maximising the synergies among various strands of policy, and of ensuring that potentially growth-enhancing public investment is managed as effectively as possible. This publication highlights the central role of regions and regional policies in generating an employment recovery and realising the innovation potential of OECD economies. The contribution of cities and rural areas in addressing climate change and shifting our economies towards green growth is also analysed.*

In addition to presenting overviews of a large body of OECD work on regional development and regional policy, this publication presents a unique policy forum in Part III, a debate over the role and potential of different approaches to regional policy: whether policies should be "blind" to geography or, on the contrary, place-based. This debate includes contributions from a number of leading academics and public officials working in the field. Some of these challenge the very approach on which the rest of this OECD Regional Outlook *is based. We at the OECD welcome such challenges, as we remain committed to the view that such open and vigorous debate is an essential part of the search for better, more strongly evidence-based policies.*

Finally, this publication offers a set of short country profiles covering the 34 OECD members. Structured so as to facilitate comparison across countries, they offer not only brief statistical snapshots of regional performance, but also qualitative information on institutions and policy settings.

Angel Gurría,
OECD Secretary-General

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The Secretariat is grateful to delegates to the OECD Territorial Development Policy Committee for valuable feedback on the draft.

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Acronyms and Abbreviations

ARRA	American Recovery and Reinvestment Act
ALMPs	Active labour market policies
CAF	*Corporación Andina de Fomento* Development Bank of Latin America
CBPP	Center on Budget and Policy Priorities
CCME	Canadian Council of Ministers of the Environment
COAG	Council of Australian Governments
CONAGUA	*Comisiòn Nacional del Agua* National Water Commission (Mexico)
CPER	*Contrats de Projets État Région* State Regional Projects Contracts
DUIS	*Desarrollos Urbanos Integrales Sustentables* Integral Urban Sustainable Development
EGS	Environmental goods and services
EPL	Employment-protection legislation
FIT	Feed-in tariff
GDP	Gross domestic product
GHG	Greenhouse gases
ICT	Information and communication technology
IEA	International Energy Agency
IFI	International financial institutions
IMACLIM	A modeling framework for sustainable development issues
IMF	International Monetary Fund
LEED	Local Economic and Employment Development
MLG	Multi-level governance
MSP	Manufacturing Skills Program
NEG	New economic geography
NGO	Non-government organisation
NSF	National Strategic Framework
NSRF	National Strategic Reference Framework
O&M	Operation and maintenance
PCT	Telecom patent applications
PES	Public employment services
PPPs	Public private partnerships
R&D	Research and development
RBMP	River basin management plans
S&T	Science and technology
SMEs	Small and medium-sized enterprises

SNGs	Sub-national governments
STI	Science, technology and innovation
STR	State Territorial Representatives
TL2	Territorial level 2
TL3	Territorial level 3
UNEP	United Nations Environment Programme
VINNVÄXT	Swedish Programme designed to promote regional competitiveness
WB-DR	World Bank Development Report
WDR	World Development Report
WFD	Water Framework Directive
ZRR	*Zone de revitalisation rurale* Rural revitalisation zone

List of TL2 Regions

For administrative boundaries, the OECD has classified two levels of geographic units within each member country. The higher level (Territorial level 2 [TL2] consist of 371 large regions, which correspond in most cases to the principal sub-national unit of government (states or provinces), while the lower (Territorial level3 [TL3] comprises 1 794 smaller regions. For more information about OECD regional classification see *OECD Regions at a Glance 2011*...

ISO	Region
AUS	New South Wales
AUS	Victoria
AUS	Qeensland
AUS	South Australia
AUS	Western Australia
AUS	Tasmania
AUS	Northern Territorry (Nt)
AUS	Australian Capital Territory (Act)
AUT	Burgenland
AUT	Niederoesterreich
AUT	Wien
AUT	Karnten
AUT	Steiermark
AUT	Oberoesterreich
AUT	Salzburg
AUT	Tirol
AUT	Vorarlberg
BEL	Reg.-Bruxelles-Cap -/Brussels Hfdst-Gew-
BEL	Vlaams Gewest
BEL	Region Wallonne
CAN	Newfoundland and Labrador
CAN	Prince Edward Island
CAN	Nova Scotia
CAN	New Brunswick
CAN	Quebec
CAN	Ontario
CAN	Manitoba
CAN	Saskatchewan
CAN	Alberta
CAN	British Columbia
CAN	Yukon Territory
CAN	Northwest Territories And Nunavut
CZE	Praha
CZE	Stredni Cechy
CZE	Jihozapad
CZE	Severozapad
CZE	Severovychod
CZE	Jihovyched

ISO	Region
CZE	Stredni Morava
CZE	Moravskoslezko
DNK	Hovedstaden
DNK	Sjælland
DNK	Syddanmark
DNK	Midtjylland
DNK	Nordjylland
FIN	Ita-Suomi
FIN	Etela-Suomi
FIN	Lansi-Suomi
FIN	Pohjois-Suomi
FIN	Aland
FRA	Île-de-France
FRA	Champagne-Ardenne
FRA	Picardie
FRA	Haute-Normandie
FRA	Centre
FRA	Basse-Normandie
FRA	Bourgogne
FRA	Nord-Pas-De-Calais
FRA	Lorraine
FRA	Alsace
FRA	Franche-Comté
FRA	Pays-de-la-Loire
FRA	Bretagne
FRA	Poitou-Charentes
FRA	Aquitaine
FRA	Midi-Pyrénées
FRA	Limousin
FRA	Rhône-Alpes
FRA	Auvergne
FRA	Languedoc-Roussillon
FRA	Provence-Alpes-Côte d'Azur
FRA	Corse
DEU	Baden-Wuerttemberg
DEU	Bayern
DEU	Berlin
DEU	Brandenburg

ISO	Region
DEU	Bremen
DEU	Hamburg
DEU	Hessen
DEU	Mecklenburg-Vorpommern
DEU	Niedersachsen
DEU	Nordrhein-Westfalen
DEU	Rheinland-Pfalz
DEU	Saarland
DEU	Sachsen
DEU	Sachsen-Anhalt
DEU	Schleswig-Holstein
DEU	Thueringen
GRC	Voreia Ellada
GRC	Kentriki Ellada
GRC	Attiki
GRC	Nisia Aigaiou – Kriti
HUN	Kosep-Magyarorszag
HUN	Central Transdanubia
HUN	Western Transdanubia
HUN	Southern Transdanubia
HUN	Northern Hungary
HUN	Northern Great Plain
HUN	Southern Great Plain
ISL	Capital Region
ISL	Other Regions
IRL	Border-Midlands and Western
IRL	Southern and Eastern
ITA	Piemonte
ITA	Valle d'Aosta
ITA	Liguria
ITA	Lombardia
ITA	Prov. A. Di Bolzano-Bozen
ITA	Prov. A. Di Trento
ITA	Veneto
ITA	Friuli-Venezia Giulia
ITA	Emilia-Romagna
ITA	Toscana
ITA	Umbria

ISO	Region
ITA	Marche
ITA	Lazio
ITA	Abruzzo
ITA	Molise
ITA	Campania
ITA	Puglia
ITA	Basilicata
ITA	Calabria
ITA	Sicilia
ITA	Sardegna
JPN	Hokkaido
JPN	Tohoku
JPN	Southern-Kanto
JPN	Northern-Kanto, Koshin
JPN	Hokuriku
JPN	Tokai
JPN	Kinki
JPN	Chugoku
JPN	Shikoku
JPN	Kyusyu, Okinawa
KOR	Capital Region
KOR	Gyeongnam Region
KOR	Gyeongbuk Region
KOR	Jeolla Region
KOR	Chungcheong Region
KOR	Gangwon Region
KOR	Jeju
LUX	Luxembourg
MEX	Aguacalientes
MEX	Baja California Norte
MEX	Baja California Sur
MEX	Campeche
MEX	Coahuila
MEX	Colima
MEX	Chiapas
MEX	Chihuahua
MEX	Distrito Federal
MEX	Durango
MEX	Guanajuato
MEX	Guerrero
MEX	Hidalgo
MEX	Jalisco
MEX	Mexico
MEX	Michoacan
MEX	Morelos
MEX	Nayarit
MEX	Nuevo Leon
MEX	Oaxaca
MEX	Puebla
MEX	Queretaro
MEX	Quintana Roo
MEX	San Luis Potosi
MEX	Sinaloa
MEX	Sonora
MEX	Tabasco
MEX	Tamaulipas

ISO	Region
MEX	Tlaxcala
MEX	Veracruz
MEX	Yucatan
MEX	Zacatecas
NLD	Noord-Nederland
NLD	Oost-Nederland
NLD	West-Nederland
NLD	Zuid-Nederland
NZL	North Island
NZL	South Island
NOR	Oslo Og Akershus
NOR	Hedmark Og Oppland
NOR	Sør-Østlandet
NOR	Agder Og Rogaland
NOR	Vestlandet
NOR	Trøndelag
NOR	Nord-Norge
POL	Lodzkie
POL	Mazowieckie
POL	Malopolskie
POL	Slaskie
POL	Lubelskie
POL	Podkarpackie
POL	Swietokrzyskie
POL	Podlaskie
POL	Wielkopolskie
POL	Zachodniopomorskie
POL	Lubuskie
POL	Dolnoslaskie
POL	Opolskie
POL	Kujawsko-Pomorskie
POL	Warminsko-Mazurskie
POL	Pomorskie
PRT	Norte
PRT	Algarve
PRT	Centro (P)
PRT	Lisboa
PRT	Alentejo
PRT	Reg. A. Dos Açores
PRT	Reg. A. Da Madeira
SVK	Bratislav Kraj
SVK	Zapadne Slovensko
SVK	Stredne Slovensko
SVK	Vychodne Slovensko
SVN	Vzhodna Slovenija
SVN	Zahodna Slovenija
ESP	Galicia
ESP	Asturias
ESP	Cantabria
ESP	Pais Vasco
ESP	Navarra
ESP	Rioja
ESP	Aragon
ESP	Madrid
ESP	Castilla-Leon
ESP	Castilla-La Mancha

ISO	Region
ESP	Extremadura
ESP	Cataluna
ESP	Comunidad Valenciana
ESP	Baleares
ESP	Andalucia
ESP	Murcia
ESP	Ciud. A. De Ceuta
ESP	Ciud. A. De Melilla
ESP	Canarias
SWE	Stockholm
SWE	Östra Mellansverige
SWE	Småland med öarna
SWE	Sydsverige
SWE	Västsverige
SWE	Norra Mellansverige
SWE	Mellersta Norrland
SWE	Övre Norrland
CHE	Region Lemanique
CHE	Espace Mittelland
CHE	Nordwestschweiz
CHE	Zürich
CHE	Ostschweiz
CHE	Zentralschweiz
CHE	Ticino
TUR	Istanbul
TUR	Tekirdag
TUR	Balikesir
TUR	Izmir
TUR	Aydin
TUR	Manisa
TUR	Bursa
TUR	Kocaeli
TUR	Ankara
TUR	Konya
TUR	Antalya
TUR	Adana
TUR	Hatay
TUR	Kirikkale
TUR	Kayseri
TUR	Zonguldak
TUR	Kastamonu
TUR	Samsun
TUR	Trabzon
TUR	Erzurum
TUR	Agri
TUR	Malatya
TUR	Van
TUR	Gaziantep
TUR	Sanliurfa
TUR	Mardin
GBR	North East
GBR	NW (including Merseyside)
GBR	Yorkshire and Humberside
GBR	East Midlands
GBR	West Midlands
GBR	Eastern

ISO	Region
GBR	London
GBR	South East
GBR	South West
GBR	Wales
GBR	Scotland
GBR	Northern Ireland
USA	Alabama
USA	Alaska
USA	Arizona
USA	Arkansas
USA	California
USA	Colorado
USA	Connecticut
USA	Delaware
USA	District of Columbia
USA	Florida
USA	Georgia
USA	Hawaii
USA	Idaho

ISO	Region
USA	Illinois
USA	Indiana
USA	Iowa
USA	Kansas
USA	Kentucky
USA	Louisiana
USA	Maine
USA	Maryland
USA	Massachusetts
USA	Michigan
USA	Minnesota
USA	Mississippi
USA	Missouri
USA	Montana
USA	Nebraska
USA	Nevada
USA	New Hampshire
USA	New Jersey
USA	New Mexico

ISO	Region
USA	New York
USA	North Carolina
USA	North Dakota
USA	Ohio
USA	Oklahoma
USA	Oregon
USA	Pennsylvania
USA	Rhode Island
USA	South Carolina
USA	South Dakota
USA	Tennessee
USA	Texas
USA	Utah
USA	Vermont
USA	Virginia
USA	Washington
USA	West Virginia
USA	Wisconsin
USA	Wyoming

Preface

On behalf of the OECD Territorial Development Policy Committee, it is my honour and privilege to introduce to you the first-ever *OECD Regional Outlook*. The production of such a volume is a remarkable undertaking, made possible by the close co-operation of member countries and the hard work of OECD staff.

The *OECD Regional Outlook* draws on the data and evidence presented in *OECD Regions at a Glance 2011* to explore the impact of the 2008 financial and economic crisis on regions and localities, as well as the policy responses to both immediate and longer term challenges facing OECD regions. To combat and reverse the trend, many regions are now focusing on innovation – harnessing each region's unique strengths and assets in an effort to boost job creation and economic growth.

Today there is a growing demand for quality data on, and analysis of, regional policy and performance, as national and sub-national governments and organisations want to understand and map their strengths and assets. With severely strained budgets and ongoing austerity measures, sub-national governments have to be nimble and effective to adopt the very best practices whenever possible. To respond to these needs, this publication offers substantial analysis of regional trends, as well as a valuable discussion of regional policies and current governance responses around the world.

I remember not long ago we used to think about competitiveness in local, not global terms. As a former mayor, I know you were supposed to do everything you could to compete against the town or county next door. You'd cut taxes… you'd give away land… you'd even issue bonds to sweeten the pot… anything to get a factory or plant to relocate to your backyard. It was a zero-sum game – one that assumed there was only a finite number of jobs, and that the only way to win was to make your neighbour lose. That's an outdated view of competition. When neighbour fights neighbour, we end up in a race to the bottom. Cities and states sacrifice long-term strength for short-term benefits. And over time, the very same competitive pressures that cause a manufacturer to relocate to a new town will cause it to relocate to another country – or go out of business altogether.

Our goal is to make our economies stronger, cleaner and fairer. In my travels, I have observed a great divide in economic, social and governmental development across regions. The purpose of this committee and the *OECD Regional Outlook* is to empower these disadvantaged regions by providing them with the very best statistical information and analysis we can offer – and then, let them make informed choices so that they too can tap into their competitive advantages.

We hope you find the *OECD Regional Outlook* to be a useful and valuable resource. We encourage readers to contact us with comments and suggestions on how to make the next edition even better.

John Fernandez
OECD Territorial Development Policy Committee, Chair
July 2011

Executive Summary

The crisis has underscored the need to find a more balanced model of growth

In the wake of the global economic crisis, policy makers are keenly aware of the need for innovative policy and governance "toolkits" to generate new sources of growth, while enhancing social inclusion and environmental sustainability, as expressed in the OECD's *stronger, cleaner and fairer* agenda or the EU 2020 goals of a *smart, inclusive and sustainable* economy. Traditionally, policy debates have tended to focus on trade-offs between these three objectives, often overlooking potential synergies and interdependencies between them. Today, there is a growing awareness of the need to pursue these three objectives in a more balanced and complementary way.

This Outlook argues that a well designed framework for regional policy offers a sizeable opportunity to reconcile policy trade-offs and identify potential complementarities among these three objectives. This is because such complementarities are likely to be most evident – and manageable – where they occur, in specific places. A policy approach that takes account of specific assets that are by definition located in a particular place and seeks to co-ordinate the various sectoral policies affecting that place is more likely to achieve coherent, multi-sector policy outcomes than one relying on economy-wide policies that are "spatially blind" (though not always spatially neutral).

The overriding aim of this first *OECD Regional Outlook* is thus to present evidence-based and policy-oriented insights into how this new, more balanced development paradigm might be realised. Part I presents an overview of recent work on the relationship between regional and aggregate performance. It examines some of the long-term forces shaping regional development, such as migration and ageing, the impact of the crisis on regional labour markets and the finances of sub-national government. It then analyses policy responses to the crisis at the regional level in two critical domains – the efficient governance of public expenditures, especially public investment, at the sub-national level and policies to generate employment growth.

Part II offers a more focused treatment of two of the key long-term challenges facing OECD regions: policies to enhance the effectiveness of regional innovation systems and the potential role of green growth.

In order to reflect the considerable diversity of views that exists with respect to economic geography and regional policy, Part III presents a Policy Forum, comprised of a set of short contributions from various experts concerning the degree to which economic and social policy should be "spatially blind" or "place-based". Finally, Part IV provides detailed country-by-country information on regional performance and regional policy institutions.

One of the key themes that runs through the analysis presented here, particularly in Parts I and II, concerns the importance of getting multi-level governance right. Governance issues loom large in the discussion of every major challenge. This is no accident. Successful regional development depends not just on policy coherence at any one moment but on creating institutions and governance arrangements that make it easier to sustain policy coherence over time, allowing actors to evaluate and revise policy packages in a timely fashion as conditions change.

All types of regions can contribute to national growth

The evidence suggests that high sustainable growth can be achieved in different ways; there is no unique recipe for success. The data show that both high-income *and* lagging regions can grow faster *or* slower than average. While predominantly urban regions generally exhibit higher levels of productivity and GDP per capita, they do not enjoy any advantage in terms of growth performance. Indeed, although predominantly rural regions are disproportionately represented among the slowest-growing regions in the OECD, they are also over-represented among the fastest-growing: "rural" is by no means synonymous with "decline". Opportunities for growth exist in all types of regions.

Regional growth performance is shaped by such factors as amenities, accessibility, size, demographics, industry specialisation and agglomeration effects. Significantly, the principal growth drivers are not exogenous, like location or natural resource endowments. Rather, they can be affected by public policies. These drivers are human capital, infrastructure, innovation activity, scale and agglomeration effects, and, to a lesser extent, accessibility. These factors complement each other in different ways and this is where location and geography matters. The performance of a region will thus depend to a great extent on how well it manages to exploit and mobilise its own assets and resources. This in turn will determine the extent to which the region contributes to national performance.

A differentiated approach is needed to unlock the growth potential of different regions

Therefore, from a national policy perspective, it is not simply regional growth rates that matter – where growth occurs is also critical. Large and fast-growing regions will make the greatest contribution to aggregate growth, while small regions with low rates will have the least impact. The distribution of individual regions' contributions to national or OECD growth is highly concentrated, with a small number of relatively large, dynamic regions (the big "hubs") accounting for a disproportionate share of aggregate growth. The rest account for very little individually, but their combined contribution is very large and plays a fundamental role in overall performance. The contribution of 335 OECD regions over the period 1995-2007 follows an approximate one-third two-thirds rule: while big regional hubs (around 4% of the total number of regions) contribute close to one-third of aggregate growth in the OECD area, two-thirds come from the remaining regions. Moreover, contributions to aggregate growth have become increasingly skewed over time: the contribution of the few big hubs has increased, as has the cumulated contribution of the many regions in the "tail" of the distribution. The relative weight of the regions in between has declined somewhat. The same holds true for employment creation and destruction,

which tends to be highly concentrated in a small number of places. While such a distribution might be expected, given the heterogeneity of OECD regions in terms of size, actual outcomes reflect the impact of regional dynamism as well as size: growth contributions are only imperfectly correlated with regions' populations.

This skewed distribution of growth contributions, which can be observed at various scales within and across countries, is more than a curious statistical regularity. It has a number of implications:

- Policy-makers are **right to be concerned about the performance of the big regional hubs** that are their main drivers of growth. If they falter, the impact on aggregate performance will be significant.
- However, **most growth occurs outside the hubs**. Indeed, many of the fastest-growing regions are second-tier cities and intermediate regions. Policies that helped the great mass of regions in the tail of the distribution to improve their performance could have a potentially very large impact on growth.
- **The notion of an "average region" is effectively meaningless.** It is statistically useless, because there is no concentration around average values in the distribution. More importantly, it is meaningless in policy terms, because analysis of the determinants of growth at the regional level suggests that the constraints on growth that confront the leading regions are different to those confronting the rest.
- Although most of the big growth drivers are, unsurprisingly, large urban areas, **there are many big cities that make little or no contribution to aggregate growth**. Generating strong growth in such places could, in view of their size, have a palpable impact on national performance.

Ageing and migration are major trends affecting regional performance

A region's capacity to innovate, its resilience to shocks and the efficiency with which it delivers services all relate to the stock and quality of human capital embodied in its workforce. In fact, it is hard to imagine a region engaging in a sustained path of technological upgrading without an abundant supply of skilled labour. All regions face three key phenomena that contribute to continuous change in their relative endowments of human capital: population ageing that is pervasive in all OECD countries but affects regions differently, interregional labour mobility, which serves as an adjustment and a redistribution mechanism for human capital across regions, and international migration that is becoming both a major challenge and a great opportunity for regions. These three sources of population change are highly interlinked. In particular, existing differences in the age composition of regions are greatly reinforced by selective labour mobility and foreign immigration.

Migration produces individual benefits, as it allows people to select the places where they can express their full potential as workers and enjoy a higher quality of life. It also fills local demand shortages and provides a relief mechanism for regions with high unemployment. However, because migrants tend to be self-selecting, it can also reduce quantity and quality of the human capital base of home regions. Migration movements are generally concentrated in specific age ranges, and there is evidence of distinct propensities to migrate according to levels of education and sectors of employment. A natural outcome of

such a pattern is that more attractive regions see their endowments of productive labour increase, while fragile regions can fall further behind, as their populations become gradually older and less educated. The erosion of the region's human capital may then become self-reinforcing, as promising individuals leave because they see that the departure of others with high human capital reduces the opportunities available locally.

Regions play a key role in the integration of migrants

Debates over international migration tend to be driven from the national perspective, despite the evidence that migrants tend to concentrate in specific geographic areas. Successful immigration and migrant integration policies must recognise the highly differentiated spatial effects of the international mobility of labour. The skills and demographic composition of immigrant populations generally vary more across space than those of the native-born population. This heterogeneous distribution of immigrant "types" across the national territory produces spatially differentiated effects on the age, sex, language, and educational composition of local populations and workforces. Regional differences in the distribution of highly skilled foreign-born individuals, for example, are particularly marked in Mexico, the United States, Spain, Canada and Germany. Information at the regional level on the skill composition of migrants is particularly important to better inform the heated policy debate over the effects of immigration on local labour markets.

Regional and municipal governments have significant responsibilities in the management of migration and thus can greatly contribute to the successful integration of migrants. They provide labour market training, deliver immigrant settlement programmes, enact legislation governing regulated professions, and provide language services for children and youth through the education system. They help with social and economic integration (job searching and matching), fund anti-discrimination and cultural diversity programmes, provide referrals to social, health, cultural, education and counselling services for newcomers. The effectiveness of these policy efforts is still under-monitored and under-studied; yet these are key to successful integration – itself a potentially key driver for regions to enhance their performance and sustain their own and their country's growth and competitiveness. Some countries, such as Canada and Italy, have begun experimenting with initiatives designed to adjust national immigration policy to regional needs, but it remains highly centralised in most.

The regional dimension is critical to employment creation efforts in the wake of the crisis

Altogether, the OECD unemployment rate rose from a low of 5.8% in late 2007 to 8.8% in the fourth quarter of 2009, equivalent to a transition of more than 18 million workers into unemployment. In many countries, the rise in joblessness was highly concentrated in specific regions: in Spain, for example, the increase in regional unemployment rates varied from less than two percentage points to more than nineteen. Even in countries where the cyclical component of unemployment abates relatively quickly, structural unemployment will continue to be concentrated in certain geographic areas. Consequently, long-term recovery and fiscal consolidation strategies will require national and regional policies tailored to meet regional and local needs rather than one-size-fits-all approaches.

The communities that are recovering the quickest are those that have a labour force that is adaptable to external shocks. Cities are particularly well placed in this respect, given that they are less vulnerable to collapse in any single sector, like construction. Cities also attract highly skilled people, who are more likely to be able to adapt to new economic opportunities as they arise. However, all localities can work towards making their labour forces more flexible and adaptable. This requires a dual approach in terms of policy. First, it is critical to ensure that workers have a good stock of higher-level generic skills and, second, flexible systems of training are needed to enable people to learn more specialist skills throughout their working lives. Public sector actors also need to concentrate on the quality of jobs available in the labour market. At the same time, in order to build more sustainable local economies, local employment agencies need to work with employers to ensure that they make full use of the talents and skills available locally. By improving both productivity and skills levels, employers will maximise the utilisation of the local pool of talent and improve job opportunities, enhancing the competitiveness of the local economy.

Such policies are most likely to be successful if pursued on a decentralised basis, since information about local conditions is likely to be particularly important to their effectiveness: programmes concerned with improving matching, on labour-markets, training and/or subsidies to employers, in particular, are likely to be better designed at the regional or local level (or at least, with substantial scope for adaptation to particular places). Local labour market and workforce development actors can benefit significantly from the opportunity to "learn by doing" through horizontal engagement with public and private actors in other policy areas. Co-ordinating labour market policy with economic development beyond the fulfilment of short-term business requires an understanding of both regional and global conditions and an ability to help firms avoid future bottlenecks, skills gaps and deficiencies, and to improve productivity.

Better governance of public investment is a priority across all levels of government

As the post-crisis fiscal stimulus adopted in most OECD countries gives way to consolidation, public investment is coming under pressure. Nearly half of OECD countries plan to scale back public investment in their consolidation plans. Yet public investment, if well managed, represents a potentially important growth-enhancing form of public expenditure. Confronted with the challenge of supporting growth in such a tight fiscal environment, national and sub-national governments face the imperative of "doing better with less" when it comes to investment. Better governance has become a priority and a pre-condition for making better use of scarcer fiscal resources. Sub-national governments have a critical role to play here.

The crisis has brought to the fore multi-level governance challenges that are inherent to decentralised political systems, including: *i)* the **fiscal challenge**, or the difficulty of co-financing investment; *ii)* the **capacity challenge**, linked to inadequate resources, staffing or processes for rapid, efficient and transparent implementation of investment funding; *iii)* the **policy challenge**, or the difficulty of exploiting synergies across different sectors and policy fields; and *iv)* the **administrative challenge**, or the fragmentation of investment projects at the local level. These different types of challenges affect the implementation of investment schemes differently depending on regional circumstances,

and can lead to unintended consequences, ultimately potentially undermining the impact of the plans.

Given these challenges, multi-level governance instruments are among the few remaining tools to implement growth policies effectively. In particular, this requires achieving more complementarity between different types of investments (*e.g.* infrastructure, innovation and human capital). An approach to public investment, that takes little account of regional specificities or information emanating from regional actors is unlikely to be successful.

Drawing on the experience of the crisis, it is possible to identify a common set of guidelines for multi-level governance of public investment. These good practices include combining investments in physical infrastructure with the provision of soft infrastructure (*e.g.* skills development); improving the co-ordination and implementation of investment strategies across levels of government, using policy conditionality in transfer agreements or partnerships between levels of government to achieve common objectives; enhancing horizontal co-ordination within functional regions; building transparent management processes; bridging information gaps across public actors; and enhancing data and performance indicator availability through robust risk management.

The financial constraints that sub-national governments are facing today will have consequences on regional development policy over the long term. First, reduced access to financial markets and the need to cut expenditure as part of consolidation plans will affect public investment. Second, when deciding which programmes to cut, the determination to sustain consumption in the short term may take priority over long-term investment strategies.

The performance of regional innovation systems is more important than ever

Evidence shows the critical role of innovation as a durable source of regional growth. The effects of innovation-related investments are longer lasting than those in physical infrastructure. Moreover, past experience suggests that innovation success is often critical in helping heavily indebted economies "grow out" of their debt burdens without resort to default – a key concern for policy in the current fiscal environment. And different forms of innovation investment are needed for different regions, depending on their growth patterns. The OECD *Innovation Strategy* has highlighted a number of trends with respect to innovation that determine different roles for regions. Globalisation is reshaping the innovation process worldwide, with a dual effect on regions. On the one hand, it increases the need to identify possible sources of growth from within the region, as well as retaining firms and skilled talent. On the other hand, it creates opportunities for organising research and production across borders, favouring the mobility of talent and increasing the opportunities for international collaboration.

Different forms of innovation are concentrated in different OECD regions. There exist hot spots where knowledge and research are generated, as well as regions that have firms effective at transforming existing knowledge into new products and services. While the top regions on most innovation indicators are typically large and densely urbanised, there are many exceptions – such as Central Denmark, which has a leading position in wind energy. Moreover, regional positions shift over time and vary by technology, especially as technological capabilities spread across more regions. Regions may add value by investing in non-technological innovations, talent and creativity. Regional governments can play a

significant role in supporting a creative business and cultural environment that attracts skilled talent, including the "creative class", and favours innovation. Non-technological innovation can boost productivity in firms through improvements to organisational and marketing methods. Different regional innovation profiles therefore imply different patterns for growth; indeed, multiple types of regional innovation systems co-exist within the same country.

Some OECD members are increasingly incorporating the regional dimension in science, technology and innovation policies. For example, several Asian countries and Mexico define regional responsibilities with a science and technology law, and in several European countries, other laws give the sub-national level innovation-related competences. Others highlight the ways that different levels of government can work more effectively together. And many seek to use shared STI plans or other instruments to promote greater coherence and alignment of spending across levels of government, particularly for countries like Austria and Canada, where the regional level has more autonomy to spend its own funds. This increased focus on the regional dimension is supported by the evolving nature in innovation policy approaches that further highlight the role for regions. Indeed, governments are recognising that, beyond economic growth, innovation policy can address social and environmental goals as well. Public funds for innovation and research are increasingly oriented towards finding solutions to policy challenges such as environmental sustainability, ageing, or health care. In such areas, regional authorities have both the room and the mandate to act; for example, in local green public procurement and regulations, as well as in service delivery for the elderly. Furthermore, sub-national governments in the OECD are responsible, on average, for two-thirds of a country's public investment. They therefore have a vital role to play in the greening of that investment and the use of public procurement to spur innovation.

Regions face strategic choices when deciding how to boost their innovation-driven growth: they can build innovation capabilities around current advantages, support socio-economic transformation, and/or create a regional knowledge-base. All require a "smart" mix of policy instruments, along with a corresponding mix of tools for effective public action and bringing private actors into the policy process. Ultimately, innovation generation is neither linear nor predetermined. Historical accidents, human genius, and long-term concerted action all play a role in determining regional development paths. Nevertheless, regional governments are well placed to identify opportunities for innovation-driven growth and mobilise people as well as public and private resources to achieve these goals.

Urban policy must form a core element of any "green growth" strategy…

Over half the world's population lives in cities today, and this is expected to rise to as much as two-thirds by 2050. By 2020, there will be nearly 500 cities of more than a million people, including several "megacities" with populations exceeding 20 million. The interactions between the economy and the environment are highly visible at the metropolitan scale. Urban form matters: the lower the urban density, the more energy is consumed for electricity and transportation and greenhouse gas emissions emitted. Moreover, attractiveness is a key factor of city growth performance and can be hampered by a poor environment. Because green growth is about synergies between environmental and economic policies, an urban policy package is more likely to deliver green growth than a

sector-based economy-wide approach only. Cities must therefore be at the heart of the transition to a green economy.

A policy framework for an Urban Green Growth Agenda covers a wide range of different interactive elements. First, policies to support economic growth are needed. These include efforts to improve the skills of the urban workforce, promote innovation, and improve or expand local infrastructure necessary to sustain growth. Second, greening challenges and opportunities, for example examining public procurement practices or behaviour by institutions and the general public in the city, come in a wide variety of forms that are either being proposed or are already in use in cities around the world. Third, different types of policy instruments are needed to act on these challenges and opportunities and promote urban greening (*e.g.* rulemaking authority and regulatory oversight, public financial tools, adopting green procurement rules and encouraging recycling, composting and other changes in the urban public's behaviour, and information and advocacy). Each of these elements raises the underlying issue of policy mandate or jurisdiction. Green growth policies clearly involve efforts by both national and sub-national stakeholders, because no single tier of government controls the entire "toolkit" to implement a comprehensive green growth policy on its own.

… but rural areas can also make a key contribution

Many OECD governments see the renewable energy supply-chain as a promising sector for the creation of valuable and stable jobs, particularly in rural areas, since exploitation of major renewable energy sources is space-intensive and thus likely to develop primarily in these areas. The deployment of renewable energy is therefore increasingly seen as a key development opportunity for rural regions and a way for governments to give substance to "green growth" rhetoric. However, economic and workforce development opportunities are often constrained in rural areas by limited infrastructure and/or limited availability of the necessary competences to deal with new sectors or new technology. Addressing these challenges and tapping rural regions' endowment of renewable sources of energy will require improved learning capacity and the accumulation of competences in rural areas.

Rural areas that have accumulated competences and can support a multidimensional learning process are likely to benefit most from the deployment of renewable energy. This happens when investment is focused on economic activities compatible with the renewable energy supply-chain, and when the region features a diffused propensity for learning, which usually underpins self-employment and entrepreneurship. The legacy of past economic specialisation can create opportunities for such development. For instance, a given region can be specialised in the production of electricity from conventional sources and take advantage of this specialisation to develop renewables.

The supposed conflict between "place-based", as opposed to "people-centred" policies, is overblown

The OECD's Territorial Development Policy Committee was the first forum to articulate a shift in paradigm operating within national governments in their approach to regional development. From the traditional sector-specific approach focusing on short-term

subsidies to support employment in lagging regions, most member states have over the last decade begun to address regional economic performance by taking a more holistic, multi-sector approach that seeks to identify and harness local strengths and assets as a means to encourage growth and development in their regions. In other words, governments have begun to focus more on the local and regional "eco-systems" that can generate growth, which requires a multi-sector, whole-of-government approach, along with networked, multi-level governance arrangements to align objectives across different levels of government.

While there are few defenders of "old-style" regional subsidies, there remains considerable scepticism in some quarters about the OECD's new regional paradigm and, indeed, about the role of regional policy in delivering socio-economic progress. Some argue that policies should target people, rather than places, and that this implies a far greater reliance on spatially blind instruments. The Policy Forum presented in Part III of this Outlook therefore focuses on the issue of which of a place-based or a place-blind development model works best to spur growth in regions. It includes contributions from both supporters and sceptics of the new regional paradigm, reflecting a belief that, in the end, open debate and attention to evidence are central to the search for better policies. Ultimately, though, the issue is not either/or: all policies, whether place-based or spatially blind, should aim to be people-centred. The question is rather to develop a deeper understanding of what policy mixes work in what circumstances. This Outlook aims to contribute to that understanding.

PART I

Key Regional Trends and Policies

PART I

Chapter 1

Regional Growth: Disparities and Opportunities

This chapter begins with an assessment of the growth problem confronting OECD economies and the relevance of regional policy to the challenge of achieving strong, sustainable and equitable growth. It then turns to an analysis of the relationship between regional and aggregate growth performance, before analysing in depth two of the long-term forces shaping regional development: ageing and migration.

The OECD growth problem, a new development model and the role of regional policy

Among the myriad economic and social challenges facing OECD economies in the wake of the global economic crisis, there is a burning question around new sources of growth and their social inclusiveness. Despite the variety of situations in different countries, some trends emerge. In many economies, there is still room for increased labour-market participation and reduction in unemployment. However, even if these factors increase output levels, they are unlikely to generate sustained growth. Indeed, over the next decades, population ageing and political barriers to migration will limit the scope for further growth of labour resources. Economies could accumulate more capital, and notably more savings and investment could be obtained by appropriate pension, financial market and tax reforms. However, ageing trends are also expected to reduce savings and investment over the next few decades, and the financial crisis has generated concerns about the potential to stimulate OECD economies through a sustained deepening of capital and credit markets.

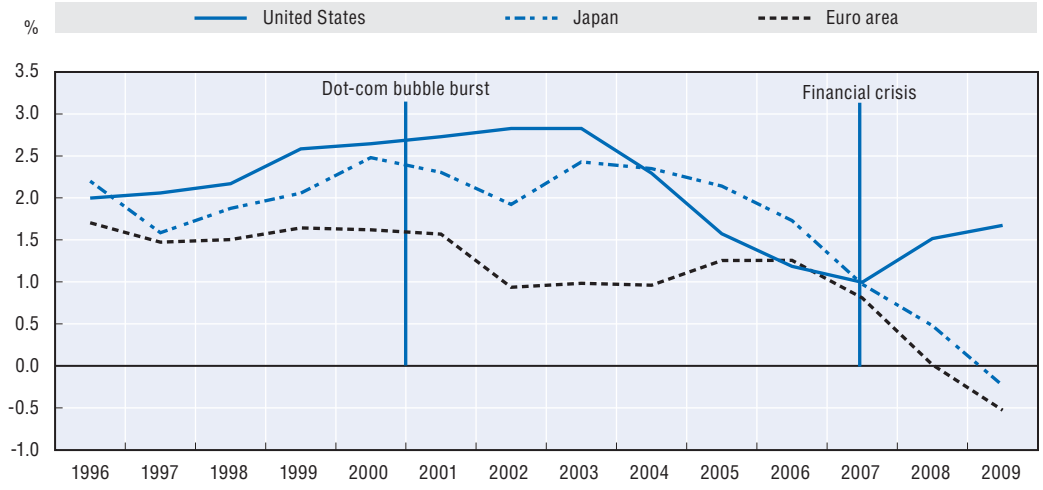
For these reasons, the policy focus has increasingly shifted towards the untapped sources of growth related to innovation and the improvement of skills. Only these can drive sustained growth of labour and capital productivity over the long run.

Productivity growth developments in the OECD have been mixed. Figure 1.1 illustrates this fact in a simple way by showing the evolution of labour productivity growth in the United States, Japan and the euro area over 1996-2009. Between the late 1990s and early 2000s, labour productivity steadily increased in the United States, stabilised in Japan and declined in the euro area. By 2003, there was a productivity gap of nearly two percentage points per year between the United States and the euro area and one percentage point with regard to Japan. These divergence trends generated an animated debate on the role of structural policies to determine the growth potential. The US positive productivity gap was assumed to be driven by the buoyant new economy, sustained by flexible labour, product and financial markets. The relation between the productivity and policy gaps triggered an agenda for structural policy reform in Europe, the so-called Lisbon Agenda.

After 2003, however, US productivity also started to decline, as it did in Japan. In the wake of the financial crisis, in all three major economic blocks, labour productivity was growing at around 1% per year. A possible explanation may be related to a significant decline in all innovation activities after the dot-com bubble burst in 2000-01.[1] Information and communication technology (ICT) investments made during the bubble had generated more research and development (R&D) and innovation, which in turn sustained productivity growth, but their effect seemed to have dissipated over 2004-07.

The financial crisis changed this picture dramatically. The rapid and deep labour adjustment in the United States induced a rebound in labour productivity, while in the euro area and Japan the inertia of employment to the crisis generated a pronounced dive in labour productivity. By the end of 2009, a 2% labour productivity gap had emerged again in

Figure 1.1. **Labour productivity growth trends in the United States, the euro area and Japan, 1996-2009**



Note: Three-year moving average of labour productivity growth (GDP per hour worked).

Source: OECD (2010), "Labour Productivity Growth", *OECD Productivity Statistics Database*, *http://dx.doi.org/10.1787/data-00493-en* (accessed on 25 July 2011).

StatLink http://dx.doi.org/10.1787/888932520099

favour of the United States. But driven mainly by labour-market adjustments and not by innovation, these productivity changes are not sustainable. If a new wave of innovation does not materialise, comparable in size to that of the late 1990s, it is unlikely that productivity growth will resume its previous peaks. Instead, a low-productivity regime similar to the one between the mid-1970s to mid-1990s could prevail again. Only recovery in innovation itself could trigger sustainable recovery in productivity. Historical evidence suggests that innovation has played a crucial role in episodes where very heavily indebted countries have managed to grow their way back to financial sustainability relatively fast, as for example after World War II.

The global financial crisis has also brought a new set of policy goals to the forefront of the policy debate. It generated a quest for a new development paradigm integrating simultaneously three policy goals: efficiency, environmental sustainability and equity, as expressed in the OECD's *stronger, cleaner and fairer* agenda and the EU 2020 goals of a *smart, inclusive and sustainable* economy. Traditionally, policy debates have tended to focus on the trade-offs among these three objectives, often overlooking potential synergies. Now there is growing awareness of the need to pursue these three objectives in a more balanced and complementary way. These interrelations are schematically suggested in the policy matrix depicted in Figure 1.2. Usually, policy evaluation focuses on the diagonal, but it is obvious that synergies can be found in all cases of this matrix. A policy system constructed in this way displays the property that the effect of every single policy is reinforced by the presence of the other policies.[2] The current discussion on green growth is an example of such positive linkages (see Chapter 3).

When it comes to addressing concerns of environmental sustainability and equity alongside growth objectives rather than as subsidiary goals, this Outlook argues that a differentiated approach taking into account the specific conditions in each type of region can help us understand trade-offs or potential complementarities among the three objectives. Furthermore, the pages that follow will argue that regional policies are well

Figure 1.2. **New development paradigm: A policy complementarity matrix**

	Efficiency	Equity	Environmental sustainability
Economic policies	**Sustained growth**	Economic reforms may increase equity	Green growth may improve sustainability
Social policies	Social policies may increase efficiency (knowledge, trust, security)	**Social cohesion**	Environmentally sustainable social policies
Environmental policies	Green economy may boost innovation	Social policies can enhance inclusiveness; poor people are the most hurt by environmental degradation	**Sustainable environment**

equipped to create synergies where they are most evident, in particular places, as opposed to policies that are "spatially blind" or based on sectoral approaches.

Indeed, one major difficulty in achieving a more integrated approach is that the three dimensions of societal progress are often disconnected in space (Figure 1.3). People usually go to large cities for higher income and growth opportunities, but often at the cost of lower environmental quality and loose community connections. Cities also tend to provide better social public goods (*e.g.* health and education) than rural areas. In contrast, people living in intermediate and rural areas often benefit from a better and less stressful environment, at the cost of less growth and income opportunities and generally lower access to publicly provided goods. These trade-offs are generally accepted and it is often evoked that "people vote with their feet" by choosing different spatial locations.

Figure 1.3. **Intensity of dimensions of societal progress and geographic space**

	Cities	Rural areas
Efficiency/income	+	−
Environmental quality	−	+
Social dimensions: Public goods (*e.g.* health, education)	+	−
Social dimensions: Community-produced goods (*e.g.* trust, security)	−	+

However, the current debate about a new development model suggests less social acceptance for these trade-offs, with citizens asking for both greener and more liveable cities, and for rural and intermediate areas providing a minimum of employment opportunities and access to public services. In practice, spatial mobility of people is often limited and presents a large inertia (see the discussion below about migration trends).

Past experience suggests other reasons for paying greater attention to the regional dimension of economic policy. Establishing and sustaining strong growth against the backdrop of high debt and fiscal constraint will depend to a great extent on the dynamics of innovation, an activity that is in many respects place-based. The need to improve innovation performance is, in turn, reinforced by other factors, not least of which to address the demographic and climate-change challenges described in the pages that follow.

Although policy makers, journalists and others are generally inclined to focus on national and international scales when discussing the crisis and its aftermath, the impact of the downturn in many countries was highly concentrated geographically, and the weakness and apparent fragility of the recovery in many OECD economies owe much to problems affecting particular regions.

This underscores the extent to which an analysis of the regional dimension highlights both challenges and opportunities. On the one hand, there is a need for geographically differentiated policy responses to address phenomena like housing price collapses and some aspects of labour-market adjustment (Box 1.1). At the same time, an approach more sensitive to specific regional contexts may also help strengthen the recovery and rebuild it on new foundations. With governments struggling to generate growth while pursuing fiscal consolidation, it is more important than ever to maximise the growth-enhancing potential of public expenditure – particularly public investment – by seeking to manage the trade-offs among structural policies as efficiently as possible and to maximise the potential synergies among them. Such trade-offs and complementarities are likely to be easiest to identify and manage where they occur – in particular places. Governments seeking to "do better with less" in a period of fiscal consolidation will need innovative multi-level governance arrangements if they are to make the most of scarce resources.

With these considerations in mind, the *OECD Regional Outlook 2011* is structured as follows. Part I begins with an overview of recent work on the relationship between regional and aggregate performance, so as to set regional performance in a larger perspective. It then examines some of the long-term forces shaping regional development, such as migration and ageing, the impact of the crisis on regional labour markets and the finances of sub-national government, a crucial but often under-appreciated aspect of the current fiscal environment. It analyses policy responses to the crisis at the regional level in the two domains where the regional dimension is perhaps most salient – the efficient governance of public expenditure, especially public investment, and policies to generate employment growth. Part II offers a more focused treatment of two of the key long-term challenges facing OECD regions: policies to enhance the effectiveness of regional innovation systems and the potential role of green growth. In order to reflect to some extent the considerable diversity of views that exists with respect to economic geography and regional policy, Part III presents a policy forum, comprising a series of short contributions from a range of different experts' perspectives concerning the degree to which economic and social policy should or should not be spatially blind or geographically differentiated ("place-based"). Finally, Part IV provides detailed country information on regional performance and the institutional set-up of regional policies. To be sure, this list of topics does not exhaust the regional policy agenda, but it does encompass many of the most important questions and challenges facing regional policy today.

Box 1.1. **What are place-based policies?**

This Outlook will often use the term of "place-based policies" to designate policies that take into account the spatial dimension of economic activities. For example, developing labour markets or innovation in a city or in a rural area may not entail the same type of instruments and may require a differentiated approach. Policies that are "space-blind" may miss this element of differentiation and thus are not the most effective way of promoting growth in all types of regions.

The argument in favour of space-blind policies often refers to the existence of economies of agglomeration (see Part III). People are typically more productive in large agglomerations because they have access to more capital and infrastructure, and benefit from a greater number of connections to other people. In this way the migration of people to large cities is an engine of growth for the whole economy. In consequence, policies should not interfere with this optimal allocation of resources and be defined uniformly across all regions (or be blind to space). But space-blind policies are not space-neutral and generate huge spatial asymmetries. To address this political and social problem, governments have designed subsidy-based interventions to reduce regional disparities. Such transfers are often not sustainable because they create relations of dependency and, over time, the richest regions become more and more reluctant to finance the lagging ones.

Therefore, this Outlook considers that place-based polices should reflect the OECD's "new regional paradigm" (see table below), *i.e.* a much broader "family" of policies designed to improve the performance of regions. These can be characterised as follows:

- a development strategy covering a wide range of direct and indirect factors affecting the performance of local firms;
- a greater focus on endogenous assets rather than exogenous investments and transfers;
- an emphasis on opportunity rather than disadvantage; and
- a collective/negotiated approach to governance involving national, regional and local government along with other stakeholders, with the central government taking a less dominant role.

The rationale for the new regional approach is based on the principle that opportunities for growth exist in the entire territory and across all types of regions as documented in this Outlook. Going far beyond the problem of how to address lagging regions, the aim is to maximise national output by assisting and encouraging each individual region to reach its growth potential endogenously. Place-based policies cover urban policies, rural policies and governance mechanisms across different levels of government.

Old and new paradigms of regional policy

	Old paradigm	New paradigm
Objectives	Compensating temporarily for location disadvantages of lagging regions.	Tapping underutilised potential in all regions for enhancing regional competitiveness.
Unit of intervention	Administrative units.	Functional economic areas.
Strategies	Sectoral approach.	Integrated development projects.
Tools	Subsidies and state aids.	Mix of soft and hard capital (capital stock, labour market, business environment, social capital and networks).
Actors	Central government.	Different levels of government.

Source: OECD (2009a), *Regions Matter: Economic Recovery, Innovation and Sustainable Growth*, OECD Publishing, *http://dx.doi.org/10.1787/9789264076525-en*.

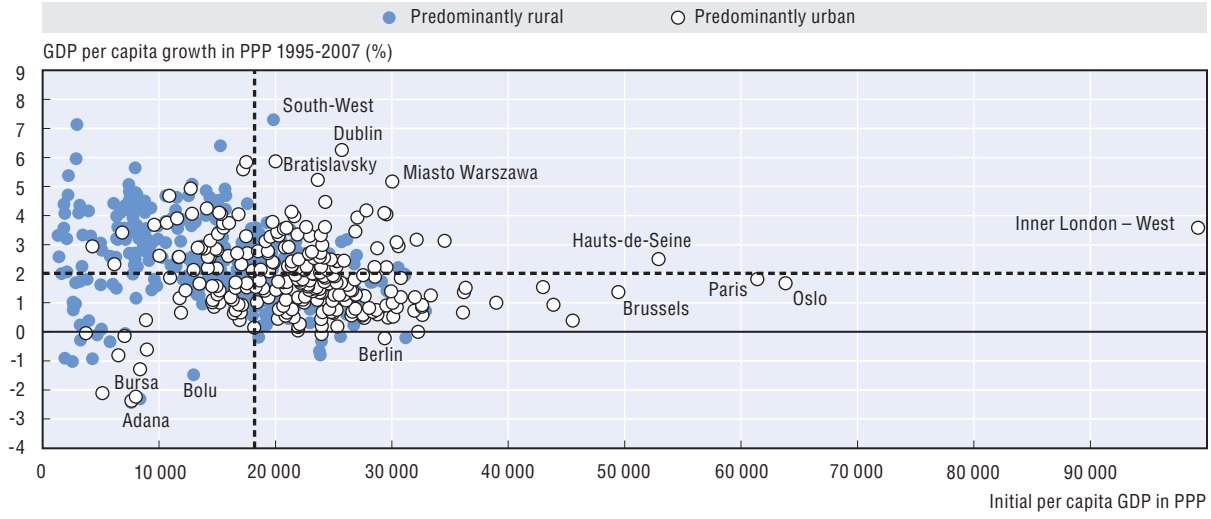
How regions contribute to national and OECD-wide growth and employment

Opportunities for growth are observed in all types of OECD regions

Over the past 15 years, regional growth in OECD countries has been quite heterogeneous. Figure 1.4 shows how the 1995 GDP (gross domestic product) per capita level in each region relates to the subsequent growth rate over the period 1995-2007. This relation at the country level is usually displayed negatively, *i.e.* countries with a higher level of GDP per capita tend to grow slower than the lagging ones. This implies that some convergence of incomes is taking place at the country level. The picture at the regional level, however, is much less clear. No particular relation seems to emerge. The cloud of data points in Figure 1.4 shows that both high-income regions and lagging regions can grow faster or slower than average and *vice versa*.

Figure 1.4. **A large variation of regional growth profiles, 1995-2007**

Predominantly urban and rural regions, 1995-2007



Note: The vertical and horizontal lines correspond, respectively, to the combined urban and rural average growth rates and the average income level in OECD regions. Regions from Australia, Canada, Iceland, Mexico, New Zealand, Switzerland and the United States are missing due to the lack of GDP data at TL3 level.

Source: OECD (2009b), *How Regions Grow: Trends and Analysis*, OECD Publishing, *http://dx.doi.org/10.1787/9789264039469-en*.

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Indeed, while predominantly urban regions have generally exhibited higher levels of productivity and GDP per capita, they have not seen any advantage in terms of growth performance. In other words, and contrary to possible *a priori* view, predominantly rural regions appear to be disproportionately represented among the fastest growing regions (Figure 1.4). This suggests that the recipe for high sustainable growth rates is not unique and that strong growth can indeed be achieved in different ways. The greater heterogeneity in rural regions' performance might well point to greater variation in the challenges facing such regions, but the data provide little support for the widely held belief that rural regions are necessarily in decline.

The convergence forces stem from the ability to import technical, managerial and other innovations from the more advanced economies – in short, to catch up by imitating the leaders. Against this, however, a major strand of the economic geography literature concerns the benefits of large urban agglomerations. It stresses the cumulative effect of the

economies of scale, labour-market pooling, forward and backward linkages, network effects, knowledge spillovers and other internal and external economies that firms may be able to exploit when economic activity is geographically concentrated. It is these effects that drive urbanisation and account for the well-established empirical observation that large urban areas tend to be characterised by higher productivity and higher levels of per capita value added. On its own, the logic of agglomeration would lead one to expect divergence of regional performance over time, with the leading regions pulling further ahead. In a world shaped solely by agglomeration, one would expect divergence to dominate until the forces of attraction driving increased agglomeration began to reach their limits and were overcome by the forces of repulsion (as when congestion and other diseconomies begin to outweigh the advantages of agglomeration).

Among rural and intermediate regions (see Box 1.2), the relation between the initial GDP per capita level and subsequent growth broadly displays a negative slope

Box 1.2. **Defining sub-national units: What is a region?**

In any study of economic and social processes, the choice of the unit of analysis is of prime importance. Regions may be defined on the basis of labour-market or other data that suggest the existence of a functional economic region, in line with administrative boundaries or through some combination of the two (economic and administrative) approaches. While there is much to be said for identifying and understanding functional regions, the data requirements for identifying them are extremely demanding – especially if the aim is to cover the whole of the OECD area – and they are in any case constantly changing. Policy, moreover, is often designed and implemented within administrative boundaries and national statistical bodies gather data that reflect administrative divisions. The *OECD Regional Statistics Database* therefore reflects such boundaries, albeit with an awareness of the limitations of such data. Where possible, data that reflect a more functional approach are often used to supplement the analysis based on data for administrative units.

For administrative boundaries, the OECD has classified two levels of geographic units within each member country. The higher level (Territorial level 2 [TL2]) consists of 371 large regions, which correspond in most cases to the principal sub-national unit of government (states or provinces), while the lower level (Territorial level 3 [TL3]) comprises 1 794 smaller regions. For functional boundaries we employ the *OECD Metropolitan Database*, covering 90 metropolitan regions from OECD countries; however, it does not cover non-metropolitan regions.

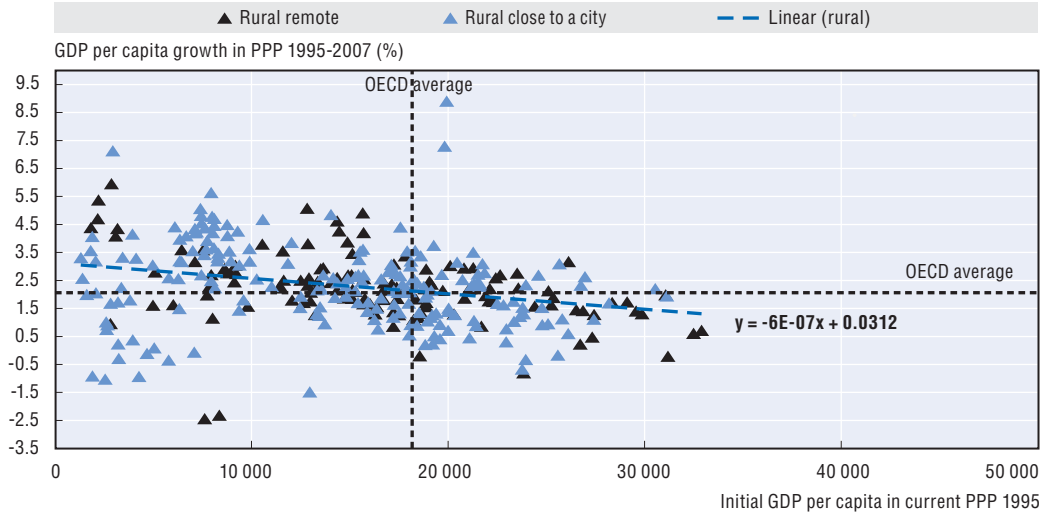
A second important issue for the analysis of sub-national economies concerns the different "geography" of each geographic unit. For instance, in the United Kingdom one could question the relevance of comparing London to the rural Shetland Islands, despite the fact that both belong at the same territorial level. To take account of these differences, the OECD has established a regional typology according to which TL3 regions have been classified as predominantly urban (PU), predominantly rural (PR) and intermediate (IN). An extended regional typology has been applied to Europe and North America. The new typology distinguishes between rural regions that are located close to larger urban centres and those that are not. The result is a four-fold classification of TL3 regions into: predominantly urban (PU), intermediate regions (IN), predominantly rural regions close to a city (PRC) and predominantly rural remote regions (PRR). The extended typology has not yet been applied to Australia, Japan and Korea or to emerging economies, owing to limits on the available data.

Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en*.

(Figures 1.5 and 1.6). Thus, forces of convergence appear to be dominant during the period 1995-2007, reinforcing the conclusion of OECD (2009b) that strong growth is not necessarily associated with agglomeration processes.

Figure 1.5. **Convergence patterns across rural regions, 1995-2007**

Remote and proximate rural TL3 regions



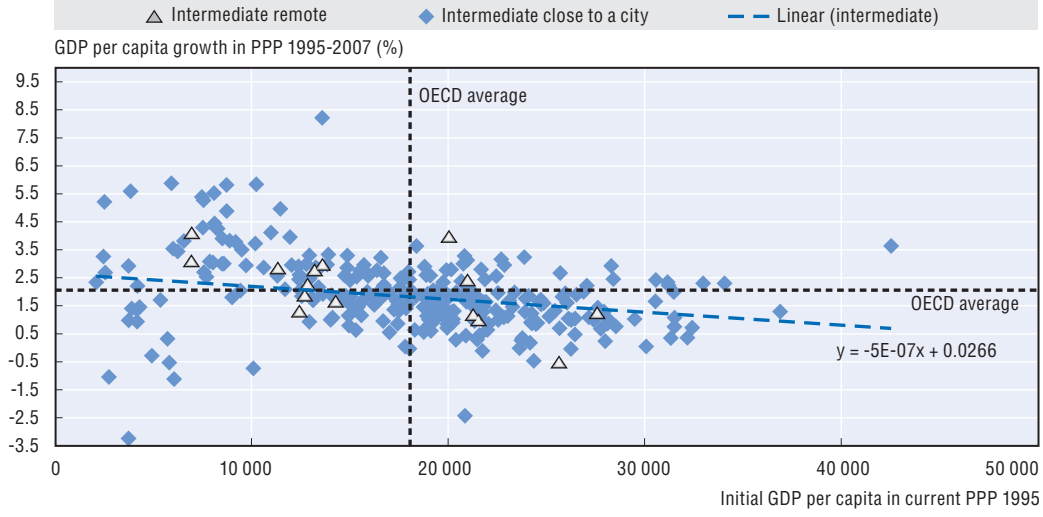
Note: Countries excluded are: Korea, Japan, New Zealand, Slovenia, since the extended OECD taxonomy has not been yet computed for these countries; and the United States, Mexico, Canada and Australia since GDP data is not available at TL3 level.

Source: OECD Regional Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520137

Figure 1.6. **Convergence patterns across intermediate regions, 1995-2007**

Intermediate TL3 regions



Note: Countries excluded are: Korea, Japan, New Zealand, Slovenia, since the extended OECD taxonomy has not been yet computed for these countries; and the United States, Mexico, Canada and Australia since GDP data is not available at TL3 level.

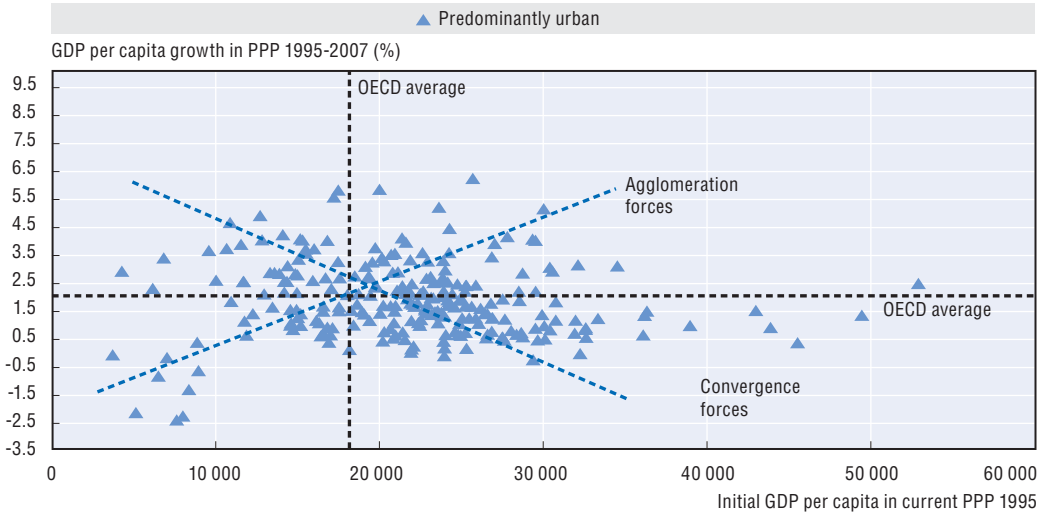
Source: OECD Regional Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520156

In contrast, among predominantly urban regions there are forces of both convergence and divergence. While urban regions have higher levels of per capita GDP overall (78% display higher initial GDP per capita than the OECD average), the majority (56%) are growing more slowly than the OECD average, indicating convergence from the top of the distribution. In other words, urban regions beyond a certain level of GDP per capita tend to experience a deceleration of growth rates. Nonetheless, one may also observe the divergence among a group of urban regions recording fast growth with higher-than-average levels of GDP per capita (Figure 1.7). These findings are fairly consistent with past analysis examining the performance of functional metro-regions; these tend to experience a deceleration of growth rates in GDP per capita growth. The analysis finds that only 45% of the metro-regions are growing faster than their respective countries over the period 1995-2005 (OECD, 2009b).

Figure 1.7. **Both convergence and divergence patterns for urban regions, 1995-2007**

Predominantly urban TL3 regions



Note: Countries excluded are: Korea, Japan, New Zealand, Slovenia, since the extended OECD taxonomy has not been yet computed for these countries; and the United States, Mexico, Canada and Australia since GDP data is not available at TL3 level.

Source: OECD Regional Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520175

In sum, the above evidence shows that possibilities for growth exist in all types of regions: urban, intermediate and rural. This mixed pattern of growth is largely driven by a wide range of interconnected factors influencing the performance of each region, including, *inter alia*, amenities, geographic location, size, demographics, industry specialisation and agglomeration effects (OECD, 2009b). Recent OECD analysis of the main factors underlying regional growth finds several endogenous elements to be critical drivers of regional performance over the medium and long term. These are human capital (both the presence of highly skilled workers and the relative dearth of low-skilled ones), infrastructure, innovation activity, scale and agglomeration effects, and, to a lesser extent, accessibility (see Box 1.5, below). These factors complement each other in important ways. The performance of a region will thus depend to a great extent on how well it manages to exploit and mobilise its own assets and resources.

The contributions of regions to national growth exhibit striking regularity

To compound the large variety of regional growth patterns into the aggregate growth rate of a country, the growth rate of each region needs to be multiplied by its size (*i.e.* its initial share in national GDP). This product is the region's contribution to aggregate growth and the sum of all contributions adds up exactly to the national growth rate. From a national policy perspective, therefore, it is not simply regional growth rates that matter – where the growth occurs is also critical. Large and fast-growing regions will have the largest impact on aggregate growth, while small regions with low rates will have the least impact.

If one orders regions by their contributions to aggregate growth (starting with the ones contributing more and ending with the ones contributing less), and plots their corresponding share of contribution to national (or OECD) GDP growth, a particular, rather skewed, distribution is obtained. It resembles a so-called "power law",[3] which is characterised by a "fat tail". This means that a few regions (the big "hubs") account for a disproportionate share of aggregate growth, while the rest collectively account for the bulk of growth but do not contribute much individually (*e.g.* fat-tail regions). However, the contribution of the tail of the distribution cannot be neglected,[4] since it plays a fundamental role in the overall phenomenon: even if they are not big growth hubs, these regions are so numerous that their contribution plays an important role in explaining aggregate growth. For an overview of the policy implications of this phenomenon, see Box 1.3.

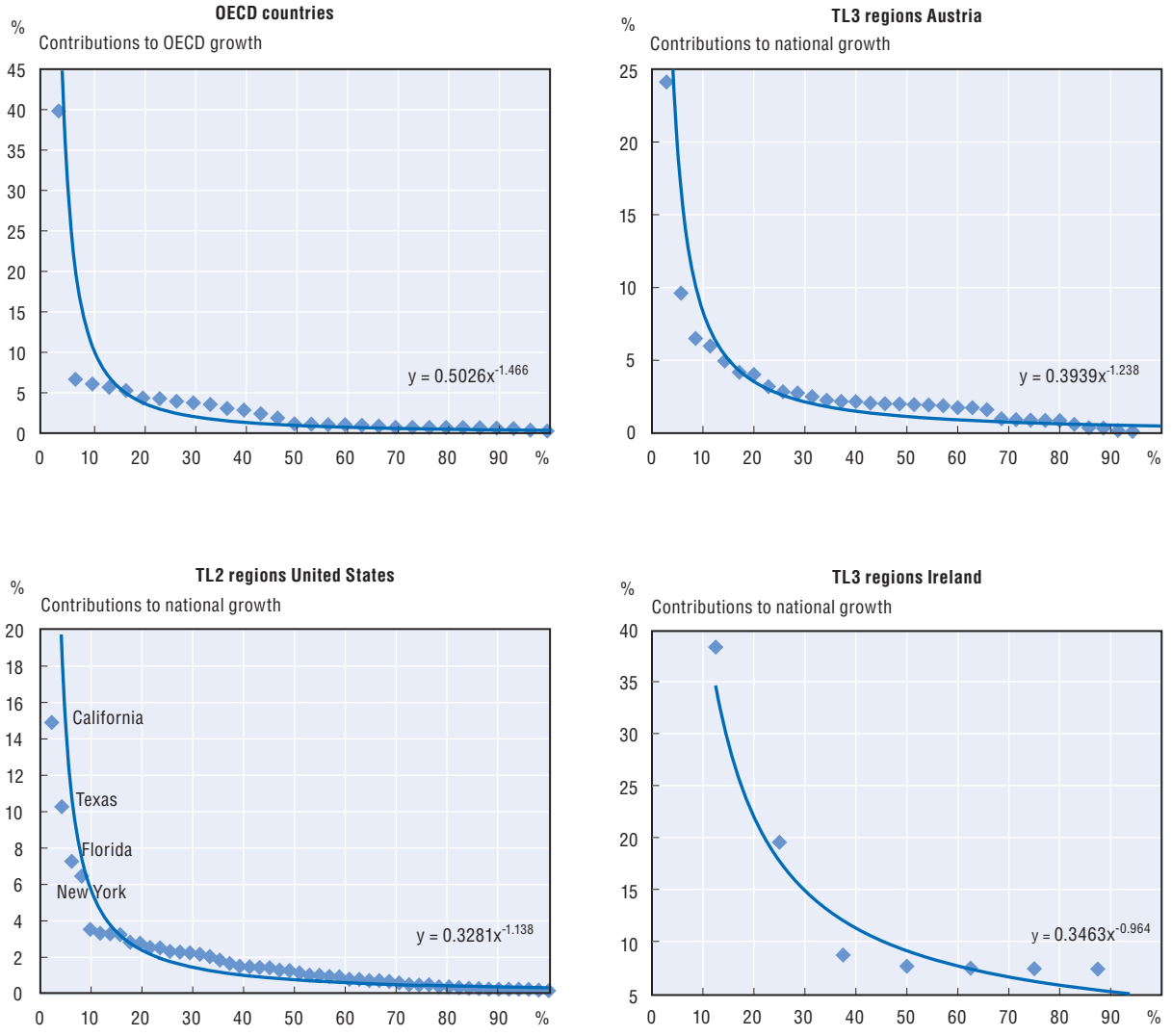
These distributions seem also to exhibit a scale-free property, meaning that this particular shape tends to replicate itself at smaller and larger scales or within sub-samples of the distribution. Figure 1.8 displays contributions to aggregate growth in four different settings: one at the country-wide level displaying countries' contributions to OECD growth,

Box 1.3. **Policy implications of growth contributions that follow a scale-free power law**

This tendency of growth contributions to follow a scale-free power law is more than a curious statistical regularity. It has a number of significant policy implications that are explored in the analysis that follows:

- Policy makers are right to be concerned about the performance of the big regional hubs that are their main drivers of growth. If they falter, the impact on aggregate performance will be significant.
- However, most growth occurs outside the hubs. Indeed, many of the fastest growing regions are second-tier cities and intermediate regions. An exclusive focus on the hubs neglects the potential impact on growth of policies that helped the great mass of regions in the fat tail to improve their performance.
- The notion of an "average region" is effectively meaningless. It is statistically useless, because there is no concentration around average values in the distribution. More importantly, it is meaningless in policy terms, because analysis of the determinants of growth at regional level suggests that the constraints on growth that confront the leading regions are different from those confronting the rest.
- There is low-hanging fruit in the "fat tail". Although the big drivers of growth are mainly large urban areas, as one would expect, there are many big urban regions to the right of the distribution – large cities that make little or no contribution to aggregate growth. Generating strong growth in such places could have a palpable impact on national performance.

Figure 1.8. **Contributions of countries and regions to growth, 1995-2007**



Source: OECD Regional Statistics Database.

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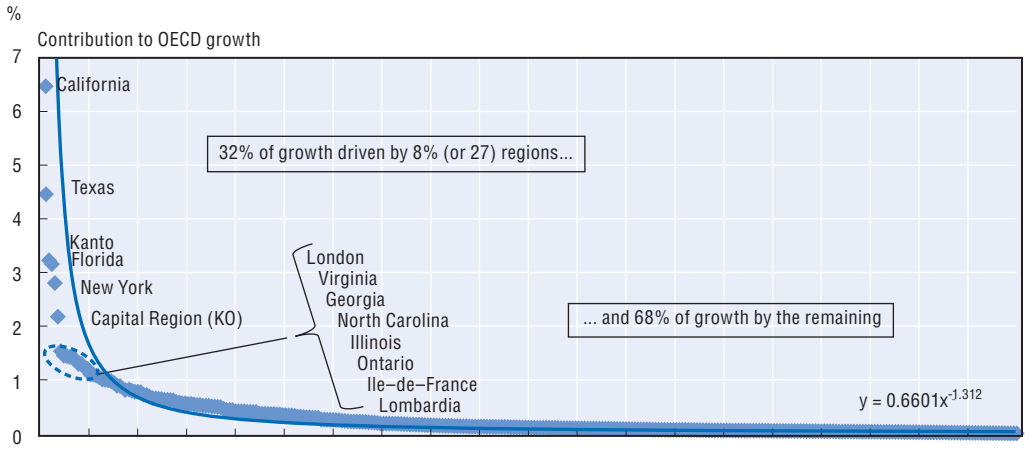
and the remaining three displaying regions' contributions to national growth in three OECD countries – two small ones (Austria and Ireland) and one large one (the United States). All four cases display a similar shape, confirming its scale-free property.

Taking the OECD as a whole, the contributions of 335 OECD Territorial level 2 (TL2) regions over the period 1995-2007 follow an approximate "one-third two-thirds rule": a few big hubs (around 4% of the total) contribute close to one-third in the OECD area, while two-thirds comes from the remaining regions. Amongst the 14 big hub regions (Figure 1.9), more than half are in the United States and the remainder are, as one would expect, dynamic capital regions such as Tokyo (Kanto), London or Paris (*Île-de-France*). Of course, the distribution of growth contributions at TL2 level reflects in part the great variation in the sizes of sub-national jurisdictions in OECD countries – TL2 regions are typically defined by the top tier of sub-national government, so constitutional structure plays a role. Nevertheless, as is clear from Box 1.4, dynamism also plays a critical role.

Figure 1.9. **Contributions of TL2 regions to OECD growth, 1995-2007**



Source: OECD Regional Statistics Database.

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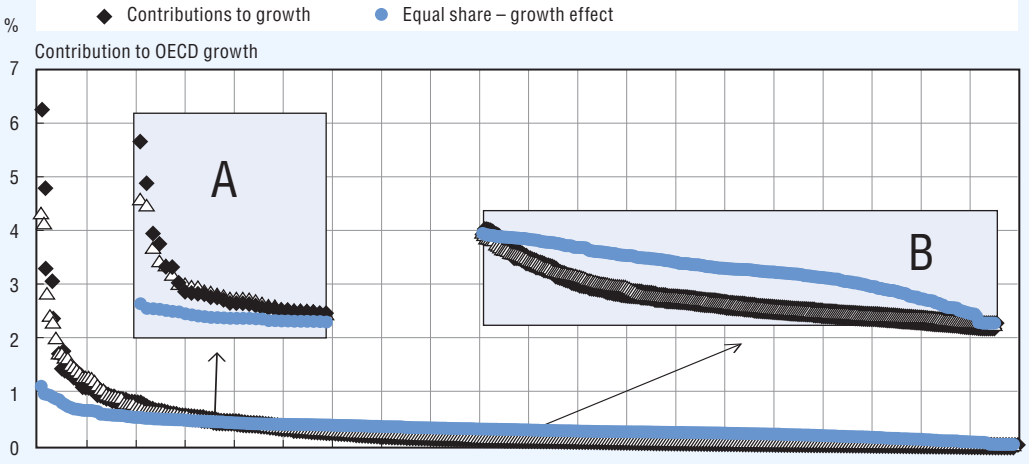
Box 1.4. **Contributions to aggregate growth: Size and growth effects**

Regions' contributions to aggregate growth depend on two elements; their size (initial share of GDP) and their dynamism (growth rates over a given period). Both effects can be tested by graphing two extreme cases: first the shape of contributions to aggregate growth assuming all regions have the same size (average initial GDP per capita) and their actual growth rates over the period 1995-2007, and secondly by assuming that all regions have the same growth rates (average growth rates over 1995-2007) and their actual size. The first case captures the growth effect and the second the size effect.

The following figure plots both extreme cases with the actual distribution of contributions to aggregate growth. As expected, the actual contributions to aggregate growth are dominated by size effects. In this context, improving the contributions of the regions in the long horizontal tail of the distribution would be mainly driven by growth effects, which in turn critically depend on endogenous factors (Box 1.5). The cumulated contribution of a synchronised improvement in the performance of these many regions could have a substantial effect on aggregate growth.

Contributions to aggregate growth by OECD TL2 regions, size *versus* growth effects, 1995-2007



Source: OECD Regional Statistics Database.

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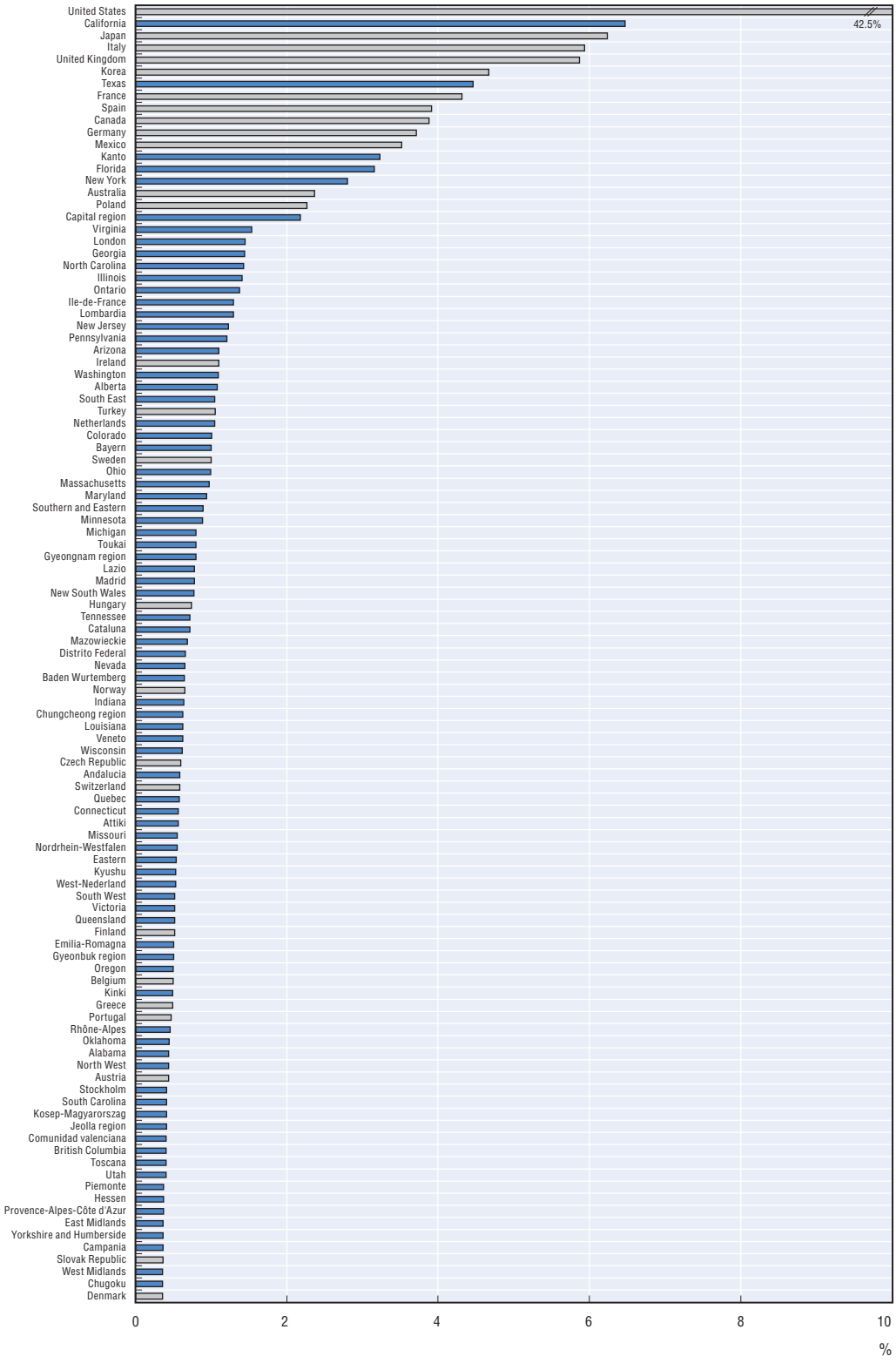
Figure 1.10. **Comparison of contributions of countries and TL2 regions to OECD growth, 1995-2005**



Source: OECD Regional Statistics Database.

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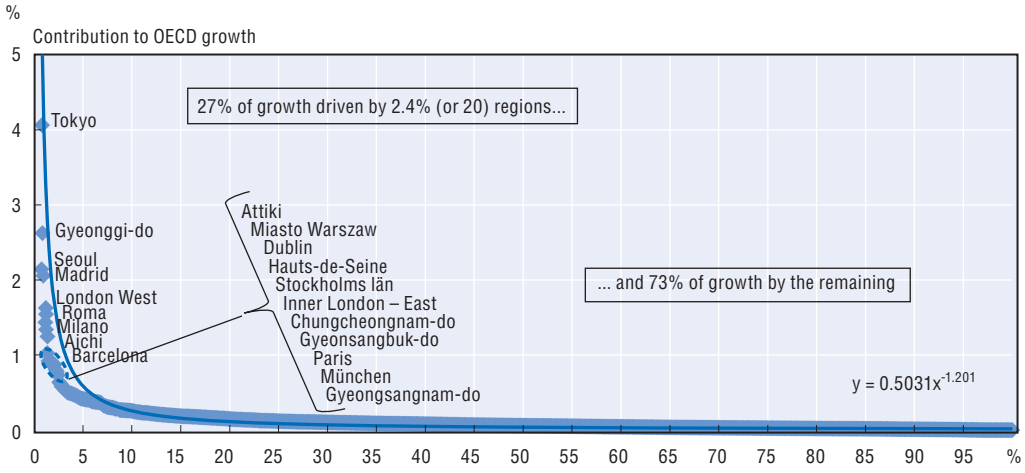
The magnitude of the largest regional contributors in many cases exceeds the contributions to aggregate OECD growth of entire countries. For example, there are 59 TL2 regions contributing more than Denmark (Figure 1.10). This means that in many cases the performance of a single region can have a larger overall impact than the performance of a country. As noted above, this to some extent simply reflects the sheer size of some OECD regions (California if it were a country would be a G8 economy) and it underscores the fact that one cannot assume that the national level is always the most important level of policy making in terms of potential impact. Decisions made by or about regions within countries can have far-reaching effects well beyond their borders. Moreover, the scale-free nature of the law reflects in part the fact that there are "Californias" at every scale: when looking across the OECD as a whole, it may seem odd to compare California to a much smaller TL2 region, such as the *Île-de-France*, but within France, the capital region itself looks California-sized in comparison with most other French regions.

The contributions to aggregate growth over the same period of those TL3 regions for which data are available[5] also display the same profile (Figure 1.11). Among TL3 regions for which data are available, Tokyo recorded the highest contribution to OECD GDP growth (4.1%), followed by Gyeonggi-do (2.5%), Seoul and Madrid (both 1.9%). The top 20 TL3 contributors to aggregate growth represent only 2.4% of the regions and yet accounted for 27% of OECD GDP growth during 1995-2005. None of the remaining 97.6% of regions individually contributed more than 0.7% of GDP, but their combined contribution amounts to almost three-quarters of aggregate growth. Since TL3 regions vary in size less than countries or TL2 regions, this reinforces the impressions that the result is not chiefly a product of the variation in the size of the regions themselves. Indeed, Box 1.4 suggests the contribution by the big hub regions is mainly due to a size effect while the contribution of the remaining regions is mainly dominated by the dynamism of regions (*e.g.* a growth effect).

On the basis of the shape of the contributions to growth it is possible to identify four groups of regions (see Annex 1.A1). The first cohort of 2% of TL3 regions has the largest contribution to growth (Table 1.1). Not surprisingly, it corresponds to big urban centres (including Tokyo, Seoul, Madrid, Paris, London, Rome, Stockholm, Attiki, Milan,

Figure 1.11. **Contributions to aggregate OECD growth by TL3 regions, 1995-2005**



Note: There are no GDP data for TL3 regions in Australia, Canada, Mexico, Switzerland and the United States.
Source: OECD Regional Statistics Database.

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Barcelona, Miasto Warszawa and Munich). The next cohort accounts for about 51% of regions – contributing for almost two-thirds of aggregate OECD growth – and includes a wide variety of predominantly second-tier urban and intermediate regions. This highlights the importance of intermediate regions and non-hub urban regions for aggregate growth. The third group covers around 32% of regions, which contributes to close to 9% of growth. Finally, the remaining 15% of regions (Group 4), by contrast, contribute virtually nothing to aggregate growth.

Table 1.1. **Contributions to growth in four groups of OECD TL3 regions**

	Number of regions (%)	Population share (%)	Contributions to aggregate growth (%)	Predominantly urban (%)	Intermediate (%)	Predominantly rural (%)
Group 1	2.3	13.2	26.4	89	0	11
Group 2	51.1	66.0	64.5	35	51	15
Group 3	31.5	15.8	8.6	18	34	48
Group 4	15.1	5.0	0.5	15	16	69

Note: There are no GDP data for TL3 regions in Australia, Canada, Mexico, Switzerland and the United States.
Source: OECD Regional Statistics Database.

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For the first group, each person has roughly the double of the average contribution to growth (*i.e.* 13% of the population corresponds to 26% of the contributions to growth). The second group has roughly a one-to-one relationship (66% of population to 64% of the contributions). The third and fourth groups combine around 21% of the OECD population, but only contribute to 9% of growth. These proportions could be interpreted as increasing returns to population scale in Group 1, constant returns to scale in Group 2 and diminishing returns in Groups 3 and 4.

As one might expect, much of Groups 3 and 4 consists of very thinly populated, predominantly rural regions; their small growth contributions largely reflect their small size. However, a significant minority of these low-contributing groups are urban regions whose small growth contribution is chiefly the product of exceptionally poor growth performance over the period: altogether, some 5% of the population of the OECD area lives in predominantly urban areas that fall into Groups 3 and 4. These regions present a particular policy challenge.

Altogether, the 50 worst-performing regions in terms of growth of GDP per capita contribute virtually nothing to aggregate growth over the period and yet are home to 33 million people. Fifteen of these regions are predominantly urban, with a combined population of over 16 million; a further 18, with a population of 10 million, are intermediate regions. This group of slow-growing regions includes such important urban areas as Grande Porto (Portugal), Hainaut (Belgium), Hyogo (Japan) and Berlin (Germany). For policy makers, the performance of these and similar regions must be seen as both a huge challenge and tremendous untapped opportunity: enhancing the dynamism of such urban centres could, on its own, have a palpable effect on the aggregate performance of the countries concerned and might also generate positive spillovers for neighbouring regions.

Over the period 1995-2007, contributions to aggregate growth among TL2 regions became increasingly skewed over time: the contribution of the few regional hubs increased, as did the contributions of many regions well to the right in the "fat tail" of the

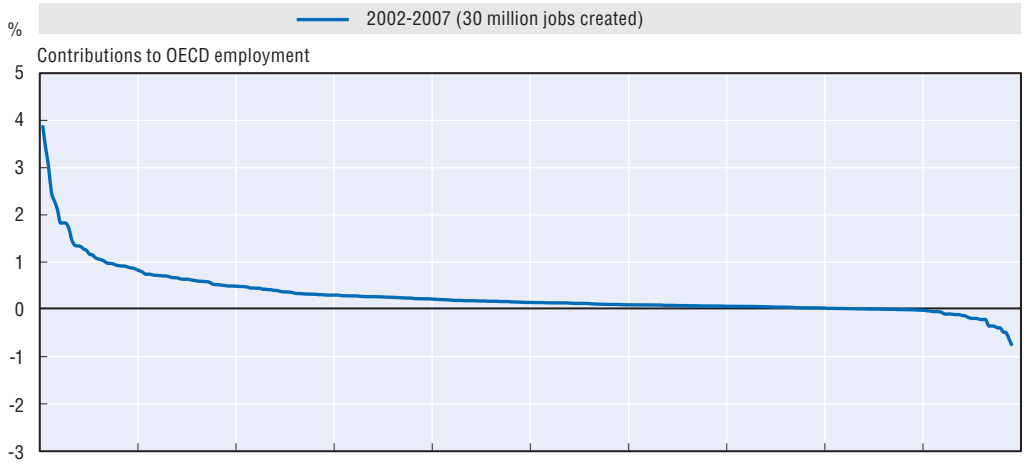
distribution, while the relative weight of the regions in between, around the bend in the curve, declined somewhat (see Annex 1.A1).[6]

Regional contributions to employment are also concentrated

Changes in OECD employment and unemployment flows, which have been quite pronounced in the context of the crisis, are also quite asymmetric and are highly concentrated in a small number of TL2 regions, as the rank distribution from the highest to the lowest employment creation shows (Figure 1.12). During the expansion preceding the crisis, 11 regions accounted for 26% of net job creation across the OECD, with 281 regions generating a further 80% and 40 experiencing a decline in employment equivalent to 6% of the total. While the available data do not yet permit a similar analysis for the period since 2007, data on US states provide a glimpse of what the turnaround has meant for employment generation/destruction (Figure 1.13). As is clear from the figure, the trends reflect the impact of regional dynamism as well as size – the positive and negative contributions shown are only imperfectly correlated with state populations.

This concentration picture has a number of implications. It seems clear that the labour-market performance of a handful of large hubs is critical to the overall outcome: these are generally rather large regions, but their contribution to total employment gains and losses is often disproportionate even to their size, and their ups and downs can have substantial knock-on effects on demand across the OECD, with reverberating effects in other regions. Policies that increase labour demand in hub regions could thus generate positive spillovers for others. This would suggest the potential for cascading effects from effective policies addressing unemployment in these hubs. Elsewhere, the focus should logically be on synchronising policies that boost employment growth in the large number of regions in the tail of the distribution.

Figure 1.12. **Rank distribution of net employment creation across OECD TL2 regions, 2002-07**



Source: OECD calculations, *OECD Regional Statistics Database*.

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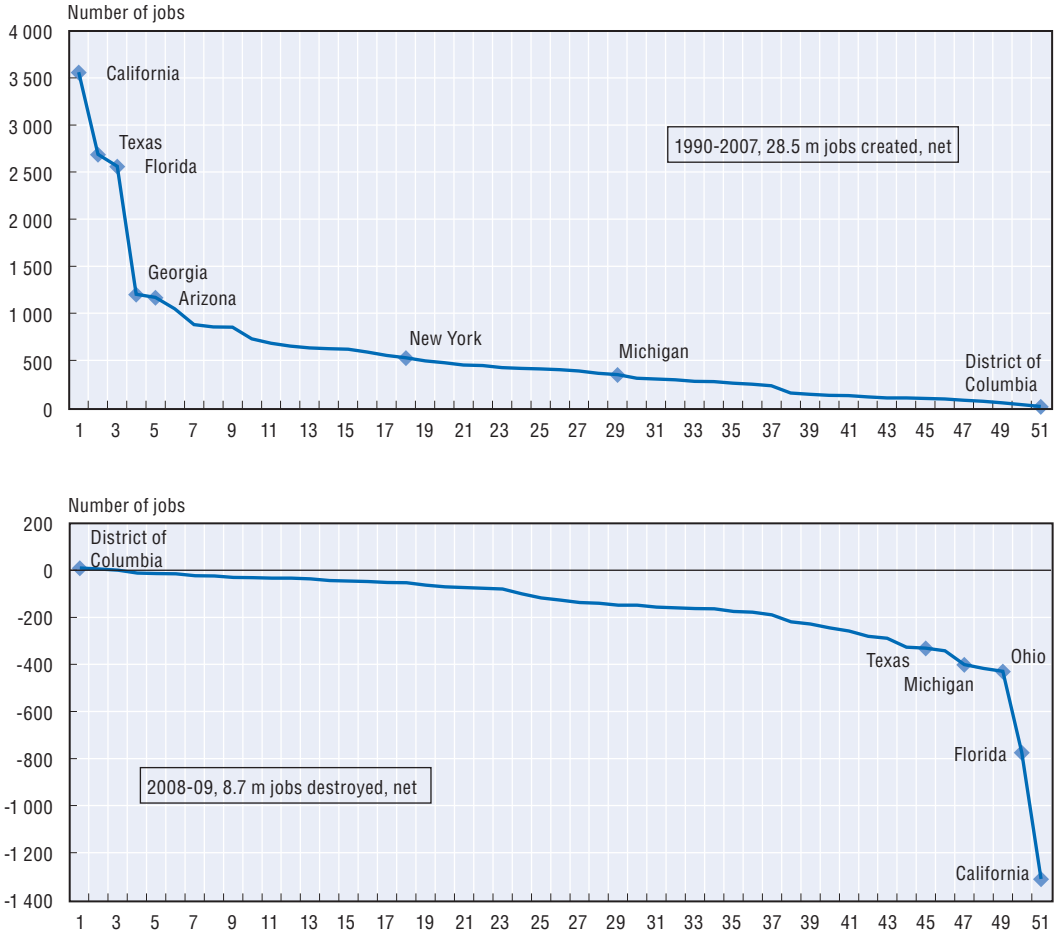
Figure 1.13. **Rank distribution of net non-farm employment creation across US states, 1990-2007 and 2008-09**



Source: OECD calculations, US Bureau of Labor Statistics.

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These facts support the rationale for a differentiated policy approach

The empirical evidence observed above implies that the notion of an "average region" has little meaning – and, as the distribution grows more skewed over time, the "average" is ever less representative of the population. Yet policy debates often tend to be conducted in terms of averages. This, in turn, has important consequences for policy. While policy makers are right to be concerned with the performance of the hub regions that are the main engines of national growth, an exclusive focus on them neglects the very important contribution of second-tier cities and the remaining fat-tail regions. Yet the tail of the distribution still accounts for around two-thirds of aggregate growth. It would be a mistake to overlook the importance of non-core urban and intermediate regions. A policy neglecting this underlying heterogeneity and focusing on averages in a spatially-blind manner could miss its target. Moreover, an analysis of the drivers of growth in different types of regions suggests that they face different constraints on growth and thus require different policy interventions – in short, the challenges facing the hub regions close to the vertical axis of the distribution, dominated by scale effects, are very different from those facing regions in the fat tail, which themselves vary with the regions' level of development

and critically depend on endogenous growth factors. A "one-size-fits-all approach" is unlikely to yield good results.

Thus, policies need to focus on the challenges facing the big growth-driving hubs, on the one hand, and those that confront the remaining regions on the other. If well synchronised, this differentiated policy approach could have a significant impact on aggregate growth. To be sure, improving the performance of any one of the regions in the fat tail will not make much difference to overall growth, but policies that facilitate an improvement in their performance in a synchronised manner could have a substantial impact. The question is whether this synchronisation can be achieved by spatially-blind policies. This is unlikely, as regional growth has to make the most of specific assets and achieve a high degree of complementarities across different sectoral policies (Box 1.5). Among the critical factors determining regional growth are the amount of labour resources and their skill levels.

Box 1.5. **How regions grow**

Recent OECD analysis (OECD, 2009b) of the determinants of growth at the regional level identifies a number of critical growth drivers, including infrastructure, human capital, innovation and agglomeration. Perhaps the most important findings are, first, that the key factors are largely driven by policy actions (as opposed to natural endowments or physical geography) and, secondly, that that these factors tend to complement each other, suggesting that an integrated approach is needed:

- Improvements in infrastructure at the regional level do not automatically lead to higher growth. Such investments need to be combined with improvements in education and innovation. This suggests that it could be productive to co-ordinate policies for building human capital, enhancing innovation and providing physical infrastructure. The effects of infrastructure investment appear to last around three to five years.
- Human capital appears to be the most robust element supporting growth in all types of regions, both the presence of high-skilled workers in the regional workforce as well as the absence of low-skilled workers. The effects of improvements in human capital also appear to last around five years.
- The third critical element is innovation, insofar as it can be measured by focusing mainly on the science and technology components of innovation for which data are available. Innovation appears to produce positive effects over a longer time span, approximately ten years.
- Economies of agglomeration also have a positive impact on growth, although they are neither necessary nor sufficient conditions to assure sustained growth rates. The fact that only 45% of metro regions grew faster than the national average during 1995-2005 and the trend towards divergence among urban regions imply that agglomerations as complex systems are working more efficiently in some cases and less efficiently in others.

Source: OECD (2009b), *How Regions Grow: Trends and Analysis*, OECD Publishing, *http://dx.doi.org/10.1787/9789264039469-en*.

Ageing and migration: Long-term forces that shape regional labour resources

A region's capacity to innovate, its resilience to shocks, and efficiency in service delivery are all related to the human capital embodied in its workforce, making both the stock and quality of human capital critical for regions. In fact, it is hard to imagine a region engaging in a sustained path of technological upgrading without an abundant supply of skilled and trained labour. Resilience to external shocks and structural change require that this labour force also be easily adaptable, which implies a need for retraining and continuous learning. The capacity to provide essential services at sustainable costs could be compromised when old-age dependency rates (the ratio between the retired and working-age population) become too high. This section provides an overview of three key phenomena that tie regions together and contribute to continuous change in their relative endowments of human capital:

- *Population ageing* that is pervasive in all OECD countries, but affects regions in very different ways.
- *Interregional labour mobility,* which serves as an adjustment and a redistribution mechanism for human capital across regions.
- *International migration* that is becoming both a major challenge and is a great opportunity for regions.

These three channels of population change are highly interlinked. In particular, existing differences in the age composition of regions are greatly reinforced by selective labour mobility and foreign immigration.

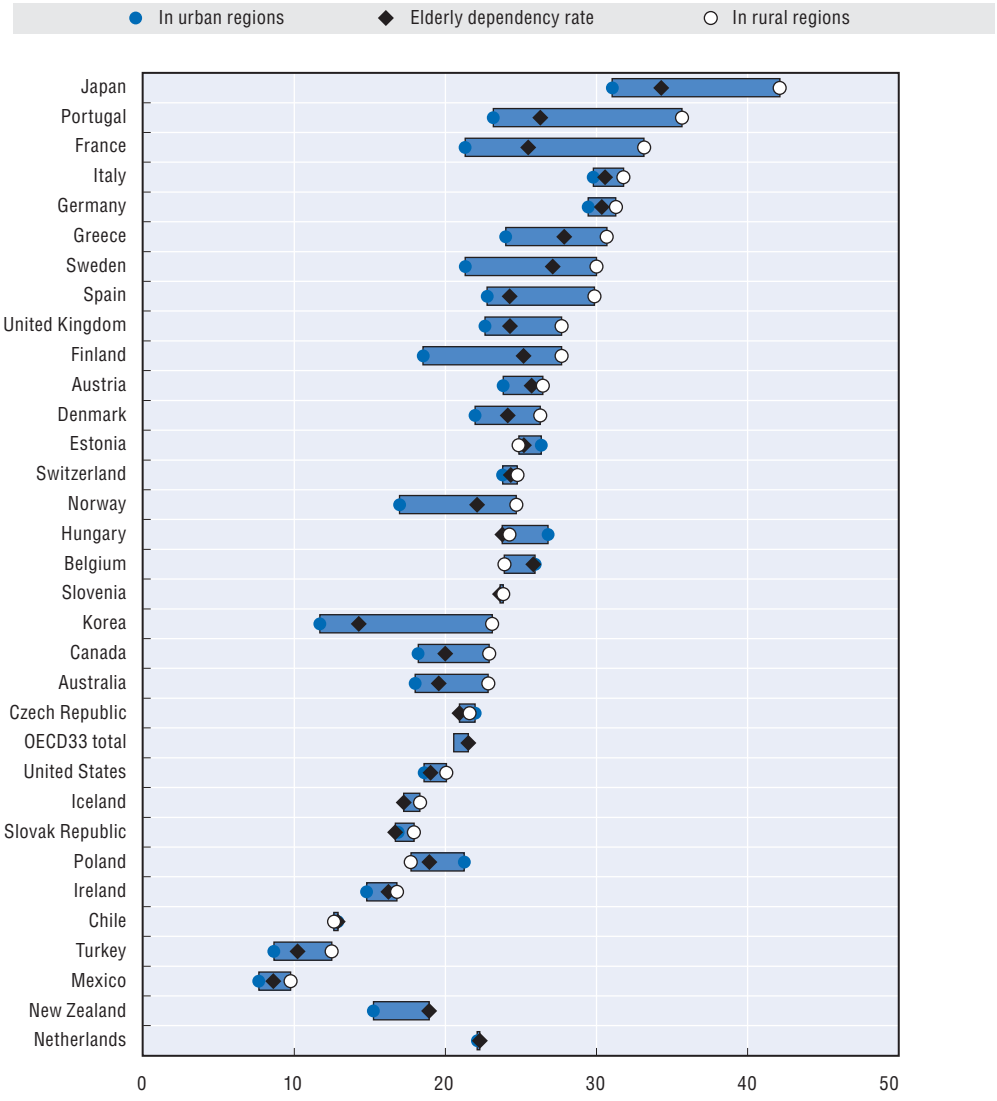
Population ageing will affect regions in very different ways

Sustained low fertility rates and increasing longevity are driving the ageing of the labour force in most OECD regions. Between 1995 and 2008, the elderly population (*e.g.* over 65 years) in OECD countries grew more than 1.5 times faster than the total population. Population ageing has been more pronounced in rural and intermediate regions than urban areas (Figure 1.14). This pattern is particularly pronounced in Japan, Portugal, France, Italy and Germany (OECD, 2011).

There is no clear-cut causal link between regional ageing and economic outcomes (ESPON, 2010). In general, one expects that a high share of working-aged people can be a driver of regional economic growth. The rapid pace of technological change increases the importance of being able to assimilate new techniques and adapt to new ways of working (Myerson *et al.*, 1990). Brunow and Hirte (2006) find that differences in age structure induce differences in per capita output growth across European regions. The most significant (positive) growth is generated by the 30-44 age group. Population ageing will also affect public spending, particularly expenditures on public pensions and healthcare provision. As the old-age dependency ratio rises, pressure is put on the provision of transfers and services. The financial burden per capita is rising in many areas because authorities find it difficult to adapt their supply of services (especially technical infrastructure facilities) at the same rate as the population ages or declines.

Some analysts take a more optimistic view of ageing, arguing that both policy responses and market forces will encourage older persons to continue to be competitive assets for regional development (Poot, 2008). One policy response is represented by measures meant to raise labour-force participation, particularly of older workers. However, increases in labour-force participation will be effective only if the labour market performs

Figure 1.14. **Elderly dependency rate: Country average and in predominantly urban and predominantly rural regions, 2008**



Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en.*
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well enough to absorb the increase in supply. Such dynamism might not be there in regions that have experienced a sustained out-migration of productive people. Other measures are incentives to enable people to innovate at older ages (*e.g.* through flatter organisational structures, in which older persons are not disproportionately required to take on managerial responsibilities). Finally, areas that are popular retirement destinations are taking advantage of the increased spending power of older age groups – the so-called "silver economy".[7]

Internal migration flows redistribute human capital across regions

Migration produces individual benefits, as it allows people to select the places where they can express their full potential as workers and enjoy a higher quality of life. Migration also fills local demand shortages and provides a relief mechanism for regions with high

unemployment. However, these benefits have to be evaluated against the possible risk of a sustained deterioration of the human capital base of sending regions, since migrants tend to be selected among the young and more productive segments of the population.

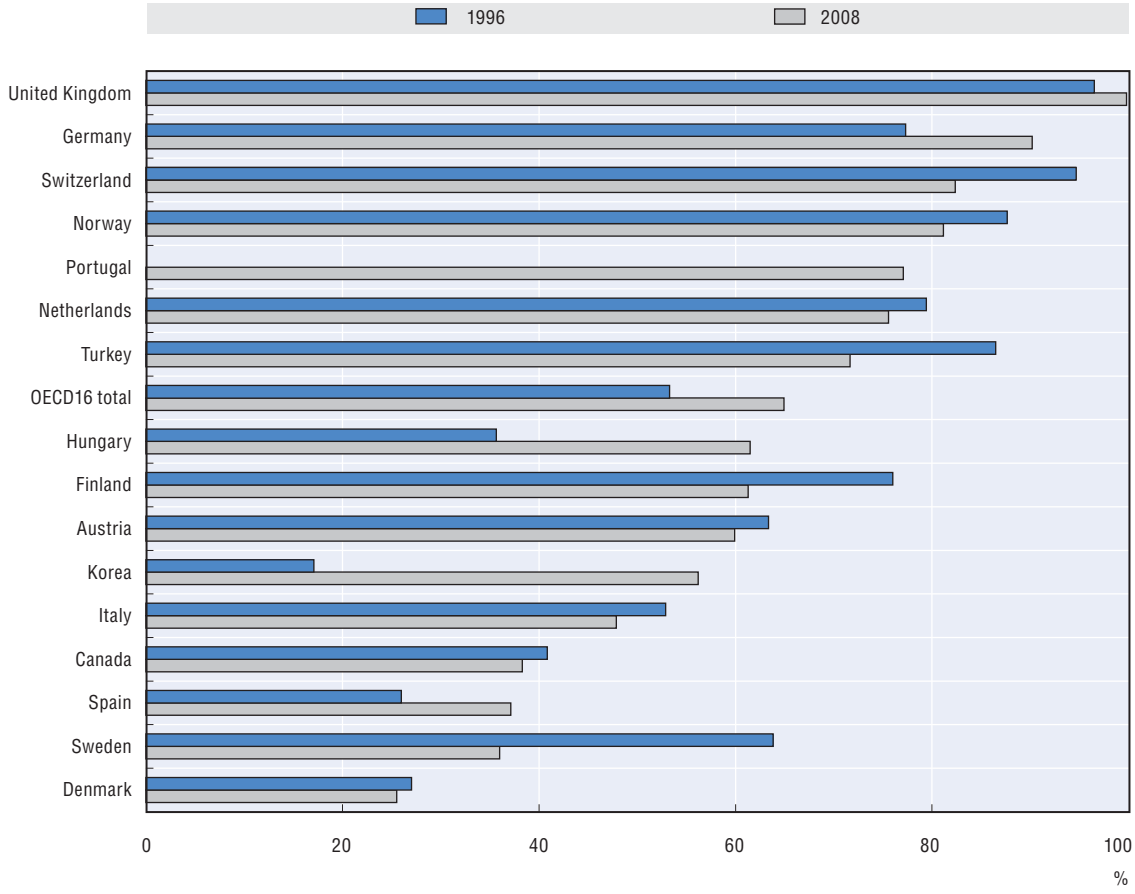
This selectivity of labour mobility implies that migration changes not only the quantity, but also the quality of regional labour forces. Observed individual characteristics, such as age, education and employment status, as well as unobserved ones, such as risk preferences or entrepreneurial spirit, all affect the decision to migrate. Migration movements are generally concentrated in specific age ranges (*e.g.* 17-19 year-olds migrating to cities to pursue tertiary education). There is also evidence of distinct propensities to migrate according to levels of education and sectors of employment. A natural outcome of such a pattern is that more attractive regions see their endowments of productive labour increase, while fragile regions can fall further behind. In the extreme case, the outflow of the most productive workers from a region in response to a negative shock can magnify and extend the downturn rather than facilitating a smooth adjustment and allowing wages to recover, as neoclassical theory might suggest. The erosion of the region's human capital may then become self-reinforcing, as promising individuals leave because they see that the departure of others with high human capital reduces the opportunities available locally. This, in turn, can have a knock-on effect on asset prices. This redistribution mechanism has evident effects on the generation of fiscal revenues and thus on the investment capacities of local authorities, which further augment the risk of a sustained downward spiral.

People "vote with their feet", and take into account in their residential choices not only economic opportunities but also the real costs of living, amenities and intangible assets of places. Urban regions retain a competitive advantage for the attraction of young people. Predominantly urban regions are the main recipients of young internal migrants (those aged 16-24 years). In the United Kingdom, Germany, Switzerland and Norway, more than 80% of young migrants move to urban regions (Figure 1.15). Thus, the scope of medium-sized cities to be growth poles, as discussed above, can also be assessed by looking at their capacity to attract young and skilled labour from larger cities or rural areas.

Regions exposed to persistent negative migration are particularly fragile. Accordingly, the use of demographic criteria to target regional policy is increasingly common. Several US federal and state programmes consider out-migration as an indicator of distress (Feser and Sweeney, 2003). In France, the main determinant for the attribution of package stimulus measures for rural areas is the ZRR (*zone de revitalisation rurale*) designation, mostly based on demographic criteria (falling active population and falling density). In Germany, regional support funding has been used to fund infrastructure in those regions experiencing demographic decline (Ferry and Vironen, 2010).

Data on interregional migration in OECD countries show that most regions experiencing sustained net out-migration also display other indicators of economic distress. Around 37% of OECD regions have experienced persistent out-migration over the last 15 years (*i.e.* net negative flows for at least 80% of the years observed in the data). These regions are characterised by higher shares of employment in agriculture and lower productivity in the same sector, very low public sector productivity, higher unemployment rates and lower GDP per capita (Figure 1.16). This reinforces the idea that regions may struggle to improve local labour conditions and productivity if those leaving are the most talented, educated and entrepreneurial (Feser and Sweeney, 2003).

Figure 1.15. **Young immigrants in large urban regions as a % of young immigrants by country, 1996 and 2008**



Source: OECD (2009c), *OECD Regions at a Glance 2009*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2009-en.*

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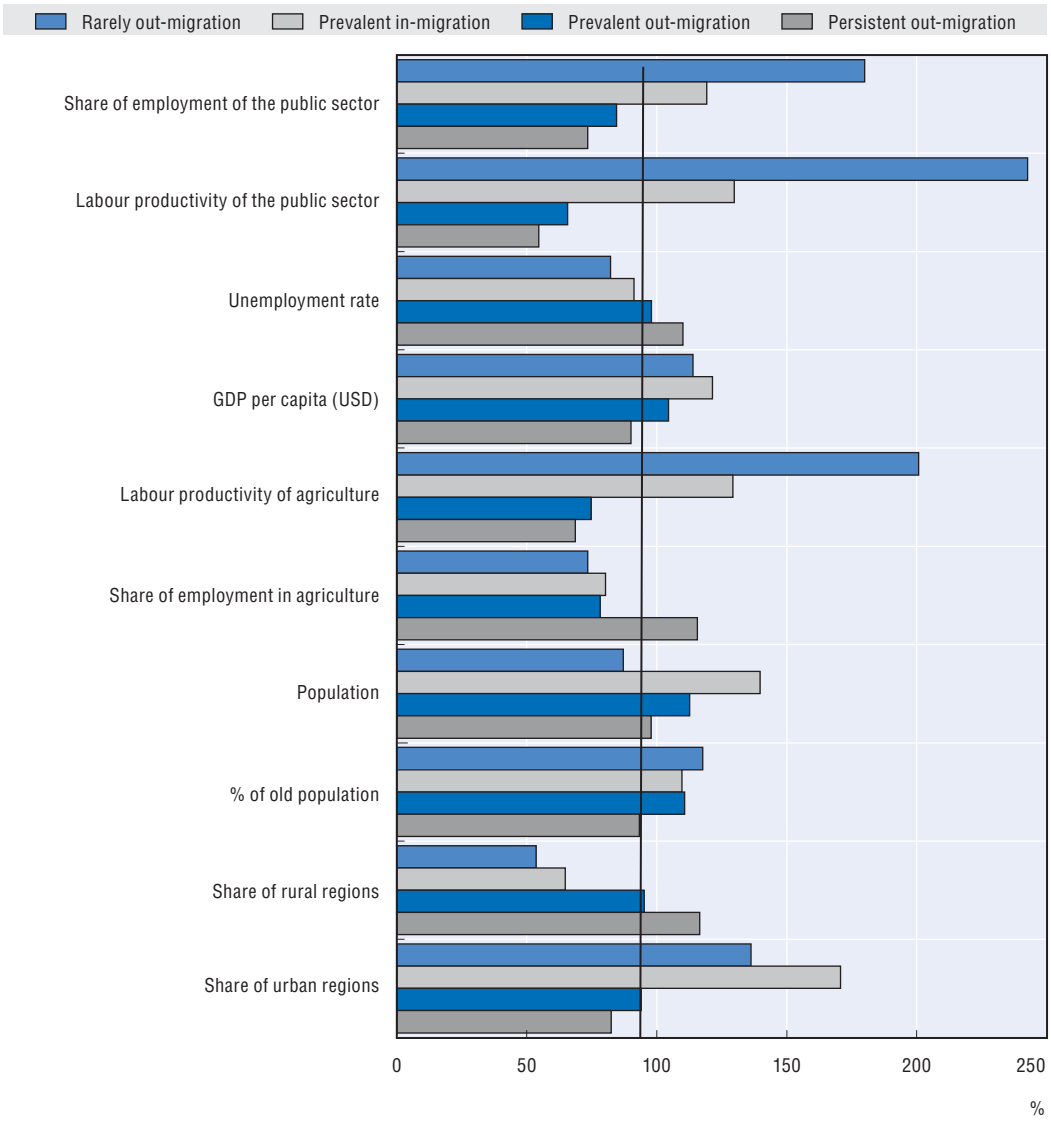
However, the "rurality" of a region (measured by population density) is not necessarily associated with migration-induced population losses. In fact, there is great heterogeneity among rural regions. Quality of life advantages linked to climate, natural amenities, lower living costs or healthy lifestyle, as well as economic opportunities in different sectors (tourism, renewable energy, etc.) explain why many rural regions manage to preserve a competitive edge in retaining or attracting population.

Evidence of the competitive edge of many rural regions emerges from a simple analysis of interregional net-migration data. In the first column of Table 1.2, net interregional migration (migration inflows to a region minus migration outflows from the region) is regressed against the "rurality" of the region according to the OECD territorial typology, its size and its unemployment rate relative to the country average. Rurality seems significantly associated with the likelihood of losing population to other, non-rural regions. However, this mainly derives from the relatively higher importance of the agricultural sector in rural regions. If one controls for the relative employment shares of different sectors (second column), the negative correlation between rurality and out-migration loses significance (Brezzi and Piacentini, 2010).

Figure 1.16. **Regional characteristics by degree of persistent loss of population, 1996-2008**

Average for all regions = 100



Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en.*
StatLink http://dx.doi.org/10.1787/888932520365

Net population losses of rural areas (the negative correlation in column 1) are also related to problems of remoteness. This is clearly shown by column 3, when the dummy variable for rural areas is replaced by a binary variable taking the value of 1 if the region is rural remote. This specification shows that rural regions that are far (in driving distance) from urban agglomerations experience significant drains on their labour force. This exposure of remote rural regions to population losses holds true even when controlling for their employment specialisation.

Identifying the effects of interregional migration on GDP per capita is complex, because causality runs in both directions – increases in productivity might lead to higher inflows of people, while selective migration can affect productivity. In Table 1.3, regions' relative output

Table 1.2. **Determinants of net-migration among OECD TL3 regions, 1996-2008**

Dependent variable	Net migration (1)	Net migration (2)	Net migration (3)
Rurality of the region	–1.075	–0.676	
	(2.47)[1]	(1.14)	
Employment share in agriculture		–2.775	–2.709
		(8.01)[2]	(7.71)[2]
Remote			–1.184
			(4.19)[2]
Constant	5.242	22.133	21.720
	(1.95)	(4.19)[2]	(4.19)[2]
Number of observations	7 856	4 518	4 518
R-squared	0.04	0.17	0.17

Note: Robust *t* statistics in parentheses: 1 = significant at 5%; 2 = significant at 1%. Estimation is by Ordinary Least Squares (OLS). The sample refers to all TL3 regions in 22 OECD countries. Other controls in all the specification are the relative (with respect to country average) unemployment rate of the region, year and country-fixed effects. In specification (2) and (3), other controls not shown are the relative employment shares in four other main sectors (manufacturing, construction, financial and public sector).
Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en*.
StatLink http://dx.doi.org/10.1787/888932521638

Table 1.3. **GDP per capita and net interregional migration, 1996-2008**

Dependent variable	All regions	Remote rural regions
	Relative GDP per head	Relative GDP per head
Lagged net migration	0.0001	0.012
	(0.34)	(1.98)[1]
Relative unemployment	–0.038	–0.049
	(1.76)	(2.36)[1]
Constant	1.216	1.324
	(43.29)[2]	(6.67)[2]
Observations	6 548	677
Number of regional fixed effects	848	90
R-squared	0.02	0.12

Note: Robust *t* statistics in parentheses: 1 = significant at 5%; 2 = significant at 1%. Year fixed effects included in all specifications. Estimation is by Ordinary Least Squares (OLS). The sample refers to all TL3 regions in 22 OECD countries. The net migration regressor is included with a one-year lag to reduce simultaneity problems.
Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en*.
StatLink http://dx.doi.org/10.1787/888932521657

per capita (*i.e.* the ratio between GDP per head in the region and GDP per head in the country) is regressed against a lagged value of net migration to the region, regional fixed effects and additional control variables.[8] The regression simply shows to what extent internal migration is a factor of convergence or divergence of regions in GDP per capita. Interestingly, while no clear effect is identifiable for the whole sample of regions, a significant positive relationship between inflows and GDP per capita emerges when the analysis is confined to remote rural regions (column 2). This suggests that regions suffering from remoteness are less able to adjust to a sustained drain of their labour force. The impact of unemployment is also stronger for remote regions.

Can countries afford to leave some regions – those characterised by continuous depopulation with outmigration of the young – in underdevelopment spirals? In the current phase of redefinition of the goals of regional policy, it is very important to take a stand on how "unfavourable" demographic changes are defined, how regions suffering from it are identified

and whether it is feasible and desirable to counter it. The question is particularly challenging for geographically large OECD countries, with several scarcely inhabited spaces located far from sizable urban centres. Before concluding that marginal and severely depopulating regions have no option but to downgrade their development ambitions (moving towards "decline strategies"), it is worthwhile to explore in greater depth the strongest determinants of depopulation and the cost-efficient solutions that might be advanced.[9]

International migration flows are strongly related to local and regional factors

Debates over international migration tend to be seen and fed from national perspectives, despite evidence that migrants tend to concentrate in some geographic areas, so that international migration means very different things in different regions. Successful immigration and integration policies must recognise the highly differentiated spatial effects of the international mobility of labour. International migration trends have both intensified and diversified in terms of countries and regions of destination. Recent migration trends have been marked by a rapid increase in inflows, notably in southern European countries and in the United Kingdom and Ireland in the context of European Union (EU) enlargement. In four Spanish regions, recent migrants represent more than 7% of the total population and the same four regions are among the top 20 TL2 regions in absolute value of recent immigrants (those who arrived in the country within the previous five years) (Table 1.4). Brussels and London emerge as major destinations for recent immigrants. In 2005, more than 13% of the population of these city regions were recent immigrants (OECD, 2011). Network effects tend to generate inertia in the settlement choices of recent immigrants.

Table 1.4. **Top 20 TL2 regions of recent immigrants, 2005**

	Number of immigrants		In % population of the region
USA – California	1 206 993	BEL – Reg.-Bruxelles-Cap.	13.1
GBR – London	795 159	GBR – London	13.1
USA – Florida	594 924	ESP – Murcia	9.5
USA – Texas	588 990	ESP – Baleares	9.4
USA – New York	552 552	ESP – Comunidad Valenciana	8.8
CAN – Ontario	464 865	ESP – Madrid	8.8
ESP – Madrid	435 013	NZL – North Island	8.3
ESP – Cataluña	410 406	ESP – Rioja	7.4
ESP – Comunidad Valenciana	339 421	CHE – Region Lemanique	7.3
USA – New Jersey	270 102	ESP – Cataluña	7.1
USA – Illinois	255 878	LUX – Luxembourg	6.7
FRA – Île-de-France	239 206	ESP – Canarias	6.3
GBR – South East	237 578	AUT – Wien	6.2
ESP – Andalucía	229 289	ESP – Navarra	5.6
NDL – West-Nederland	224 355	CHE – Zürich	5.5
DEU – Nordrhein-Westfalen	216 854	NZL – South Island	5.2
AUS – New South Wales	214 612	ESP – Aragon	5.2
NZL – North Island	197 496	IRL – Southern and Eastern	5.0
USA – Georgia	191 683	CAN – Ontario	4.7
USA – Arizona	178 263	CHE – Ticino	4.7

Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en*, and based on census data.

StatLink http://dx.doi.org/10.1787/888932521676

The skill and demographic composition of immigrant populations generally varies more across space than that of natives. This heterogeneous distribution of immigrant "types" across the national territory produces spatially differentiated effects on the age, sex, language, and educational composition of the local population and workforce. Information at the regional level on the skill composition of migrants is particularly important to better inform the heated policy debate over the effects of immigration on local labour markets. Moreover, this spatially disaggregated information can inform policy reforms in key sectors. For example, more and differentiated resources could be allocated to schools in regions experiencing sudden surges in the number of migrant children (either foreign-born or second-generation migrants).

The past decade has seen a substantial increase in the employment of immigrants with tertiary educational attainment, partly as a result of changes in migration policies to favour admission of highly qualified workers. Regional differences in the distribution of highly skilled foreign-born individuals are particularly marked in Canada, Germany, Mexico, Spain and the United States. In Canada, the population of foreign-born individuals is on average highly educated. This is partly explained by the large weight given to formal education in Canadian immigration policies. Despite large increases in recent inflows of low-skilled migrants from South America, Spanish regions have on average a similar proportion of highly skilled people, which is higher than that typically found in Italy and Portugal (OECD, 2011).

There is evidence that registered or regular migrants increase the average education level of many OECD regions, although very different effects can be observed across and within countries. In Ireland, Portugal, the Slovak Republic and the United Kingdom, the higher education level of foreign-born individuals with respect to the native-born is particularly evident (OECD, 2011). Higher rates of tertiary education among natives are observed in Nordic countries that have traditionally hosted larger numbers of refugees. In absolute numbers, highly skilled foreign-born individuals contribute greatly to the human capital endowments of large regions in Australia, Canada and the United States. Paris and London are other poles for skilled immigrants. Weighting these numbers by the size of the host region results in a broadly similar picture, even if their rank changes significantly. Ontario, London and British Columbia are the regions that benefit most from skilled migration, the tertiary educated, foreign-born population being over 15% of the surveyed labour force.

An important issue is whether regions that already host highly educated migrants have a competitive advantage in the competition for global talent, given the relevance of network effects for the location choices of migrants. It is interesting to note that the location of skilled recent immigrants is affected by the regional distribution of established immigrants. In fact, the correlation between skilled recent immigrants (having lived in the region for less than five years) and skilled established immigrants (with more than five years of residence in the region) is much higher than the one between skilled recent and unskilled established immigrants. This might be explained by network effects that are specific to the highly skilled (*e.g.* skilled immigrants passing information on job openings or creating jobs for other skilled immigrants). Such a finding suggests that it will be more difficult to boost skill endowments through immigration for those regions that are not traditional destinations for skilled immigration. A tighter co-ordination of migration policies and regional development policies might be needed to "take advantage" of migration as a lever for skill upgrading (OECD, 2011).

Besides changing the relative endowments of skilled labour across regions, the relatively young age structure of foreign migrants is also countering the rise of dependency rates in many OECD regions. Migrants can also help make the ageing process more sustainable. In particular, migrants have a very relevant social impact through day and night care of the elderly and disabled, reducing the social costs from the lack of structures and shortage of service workers. It is thus not surprising that the demand for foreign elderly carers among regional authorities in several OECD countries is rising.[10] When foreign workers perform services previously done within households, such as cooking, cleaning, and care for children, the sick, and the elderly, they free up native labour for market production, particularly women's labour that had been devoted to household production (see Cortes and Tessada, 2007 and Kremer and Watt, 2009 for a discussion of the implications for national welfare).

One of the intriguing aspects of immigration policy is that, although it is set nationally, many of its effects are felt most strongly at the state and local levels (Friedberg and Jaeger, 2009). This calls for partnership solutions among levels of governments to make the distribution of migrants closer to regional needs. Policy experiments to adjust national policy to regional needs are well established in Canada.[11] In other countries, calls for a regional or local approach to immigration policies have been raised frequently, given the need to relieve labour shortages in key sectors (from nursing to highly knowledge-intensive industries). In regional labour markets, making extensive use of seasonal labour, facilitation schemes can be put in place to connect temporary labour migration to local labour needs. This is the case in the Italian region of *Trentino Alto Adige*, where the bulk of the seasonal labour quotas are assigned to the two autonomous provinces of Trento and Bolzano.

Regional policies have a key role to play in migrant integration. Regional and municipal governments have significant responsibilities in the management of migration. They provide labour-market training, deliver immigrant settlement programmes, enact legislation governing regulated professions, and provide language services for children and youth through the education system. They help with social and economic integration (job searching and matching); fund anti-discrimination and cultural diversity programmes; and provide referrals to social, health, cultural, education and counselling services for newcomers. The effectiveness of these policy efforts is still under-monitored and under-studied.

Conclusion

The effectiveness of regional policies is still much debated. Agglomeration is often seen as an inherent feature of economic development, so the policy agenda linking geography and economics is often limited to managing the urbanisation process in the best possible way. This is too narrow a view; as the foregoing has demonstrated, there is far more to regional development than agglomeration, a process that, while undeniably important, is neither necessary nor sufficient for strong aggregate growth. Yet while growth is possible in all sorts of regions, it is by no means assured. The fact that the constraints on growth appear to vary across different levels of development and different types of region points to the need for a differentiated approach – for policies that take "place" seriously. That does not mean that all policies could or should be "place-based", but it certainly suggests that place-based approaches have a key role to play. This conclusion is reinforced by the analysis in this chapter concerning trends in demography and migration, which are highly differentiated geographically and which will have a major influence on the development of OECD economies in the decades to come.

The role and potential of regional policies is further explored in the chapters that follow, which focus on a range of policy domains – including labour markets, public investment, innovation and "green growth" – where the regional dimension is particularly important. These are, moreover, spheres in which well-crafted policies can do much to manage the trade-offs and complementarities among the three dimensions of social progress with which this chapter began – efficiency, equity and environmental sustainability. Regions are the locus where complementarities among them are most visible and most effectively managed. Regional policy, then, is not simply another line of policy running in parallel to sectoral policies, still less a "compensatory" mechanism using fiscal transfers to counteract the natural "lumpiness" of economic activity. Rather, it is about co-ordinating and optimising the mix of sectoral policies where they interact – in particular places – with a view to enhancing the lives of people living in those places.

Notes

1. For a descriptive discussion of these productivity and innovation trends, see Dupont, Guellec and Oliveira Martins (2011). See also OECD (2011d) for a comprehensive analysis of innovation trends in the OECD.
2. For a discussion about reform complementarities, see Braga de Macedo and Oliveira Martins (2008).
3. The relationship between two quantities is said to conform to a "power law" when the frequency of a value occurring in a distribution varies as a power of some attribute of that value (*e.g.* its size). Many man-made and naturally occurring phenomena are distributed according to power-law distributions. A power law implies that small occurrences are extremely common, whereas large instances are very rare. The power-law relationships often also exhibit a further important property: scale invariance. In other words, the relationship tends to be replicated at different scales or within sub-samples of the distribution. The scaling property means that if we zoom in on each level of the scale, we will find the same statistical features.
4. This is a fundamental difference from a normal distribution or an exponential distribution, where the decay to zero is so rapid that the contribution of the tail can be neglected without any significant loss of information.
5. There are no TL3 GDP data for Australia, Canada, Mexico and the United States.
6. This finding is consistent with previous studies documenting a global trend characterised by two opposing trends, namely the trends towards both globalisation and localisation (McCann, 2007).
7. Certain regions, such as Kainuu in Finland, have responded to demographic ageing by developing specialist facilities for older people. Kainuu branded itself as a "Seniorpolis", aiming to attract other older people to migrate to the municipality (Ferry and Vironen, 2010). Similarly "sunbelt" states in the United States have become a destination for retirees.
8. The inclusion of regional fixed effects in the regression partly controls for the simultaneity problem between GDP per head and net-migration, by controlling for fixed unobserved characteristics of the regions.
9. The Territorial Agenda of the European Union emphasises the need for new forms of urban-rural partnerships and promotion of regional clusters of innovation as goals for the European territory. Regional policy instruments such as the Structural Funds, Cohesion Funds and the Territorial Co-operation objective have also among their objectives the retention of younger persons in depopulating areas and redressing the exodus from shrinking areas.
10. For example in Veneto (Italy), more than 50 000 demands were filed in 2007 to sponsor the immigration of foreign service workers; only 10 000 of these demands will be allocated according to migration quotas in "Decreto Flussi 2007".
11. In Canada, a number of federal-provincial agreements have been signed and renewed within the framework of the "Citizenship Immigration Canada" programme that gives the provinces the right to nominate immigrants specifically destined for settlement in their jurisdiction. The number of provincial nominees increased by 66% in 2006 compared to 2005 and, as a result, the total for the whole country reached 13 336. Manitoba accounted for one-half of Canada's provincial nominees,

with 6 661 in 2006. A number of other provinces also significantly increased their intake of provincial nominees in 2006, including Nova Scotia, British Columbia, New Brunswick, Prince Edward Island, Saskatchewan, and Alberta. The province of Québec has one of the largest and most developed programmes to link migration to regional development objectives – "Regionalization of Immigration in Quebec", which started in 1992.

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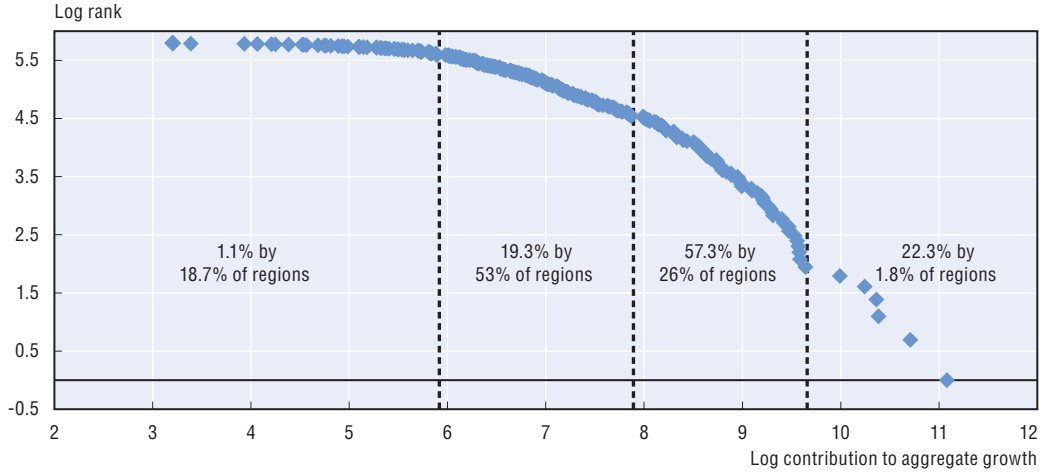
ANNEX 1.A1

Evidence on Different Regional Growth Regimes

The distribution characterising the relation between the regional contribution to growth and their respective log rank in the sequence can be easily visualised by plotting the logarithms of both variables. When the distribution follows a strict power law, the log-log chart should display a linear relationship with a constant negative slope. Departures from the linear relation or changes in the slope can be used to identify break points between groups of regions in terms of their contributions. Among the 335 OECD TL2 regions, the log-log relation reveals a negative downward line with a concave curvature, confirming that several regimes are at work (Figure 1.A1.1). In the first group, around 2% of OECD TL2 regions account for roughly 22% of aggregate growth; the next quarter contribute 57%; the 53% which follow them account for close to 20% of growth and the remaining 20% or so contribute next to only 1%.

Figure 1.A1.1. **Log rank and log contributions to growth, TL2 regions**



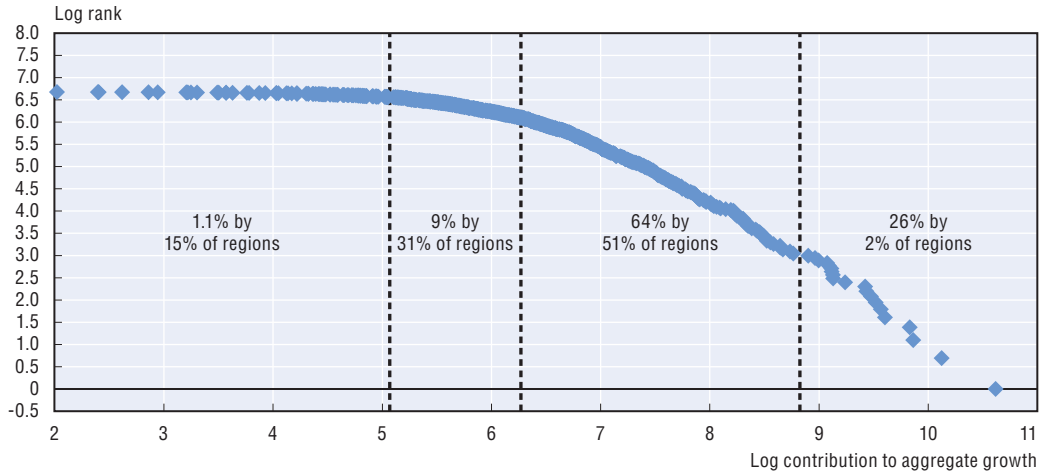
Note: The four groups of regions are portioned when there are breaks in log-log relationship, reflecting common proportional contributions in regions from each of the four groups.

Source: OECD Regional Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520384

Figure 1.A1.2 plots the same type of graph for the TL3 regions. The log-log relationship among TL3 regions is more linear than that among TL2 regions, especially for regions in the latter part of the sequence, implying that the same power-law regime prevails for a larger part of the TL3 distribution.

Figure 1.A1.2. **Log rank and log contributions to growth, TL3 regions**



Note: The four groups of regions are portioned when there are breaks in log-log relationship, reflecting thus common proportional contributions in regions from each of the four groups. There are no GDP data for TL3 regions in Australia, Canada, Mexico, Switzerland and the United States.

Source: OECD Regional Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520403

An interesting feature is that the distribution of the contributions to aggregate growth among TL2 regions became increasingly skewed over time. Over the period 1995-2007, the contribution of the few regional hubs increased, as did the contributions of many regions well to the right in the "fat tail" of the distribution, while the relative weight of the regions in between, around the bend in the curve, declined somewhat. In other words, the asymmetries between the large hubs and the many small and intermediate regions continued to increase. In other words, the concept of an "average region" has become even less meaningful over time.

PART I

Chapter 2

Regional Responses to the Jobs Crisis

This chapter offers a preliminary analysis of the impact of the crisis on regional labour markets, using recent regional employment data. The discussion then examines the kind of policies needed to foster the creation of sustainable employment during the recovery phase and the extent to which regional or local action may be critical to the effectiveness of such policies.

The employment challenge in regional labour markets

The employment impact of the crisis is significant and lasting

Altogether, the OECD unemployment rate rose from a low of 5.8% in late 2007 to 8.8% in the fourth quarter of 2009. This corresponds to a transition of more than 18 million workers into unemployment; there was also a comparable increase in the number of people leaving the labour force despite wanting a job or accepting part-time work when they would have preferred full-time employment (OECD, 2010a). Although OECD-wide unemployment appears to have peaked at the end of 2009, the current shaky recovery has so far resulted in little or no improvement in labour-market outcomes in most countries.

In many countries, the rise in joblessness was highly concentrated in specific regions. Even in countries where the cyclical component of unemployment abates relatively quickly, structural unemployment will continue to be concentrated in certain geographic areas. Out-migration of more mobile labour – usually high-skilled – will tend to reduce the quality of the labour pool in such places, making depressed regions or cities progressively less competitive. The long-term impact of the crisis will therefore persist in regions with structural problems, and this will intensify the challenges that these regions face. Consequently, long-term recovery and fiscal consolidation strategies will require national and regional policies tailored to meet local needs rather than a one-size-fits-all approach.

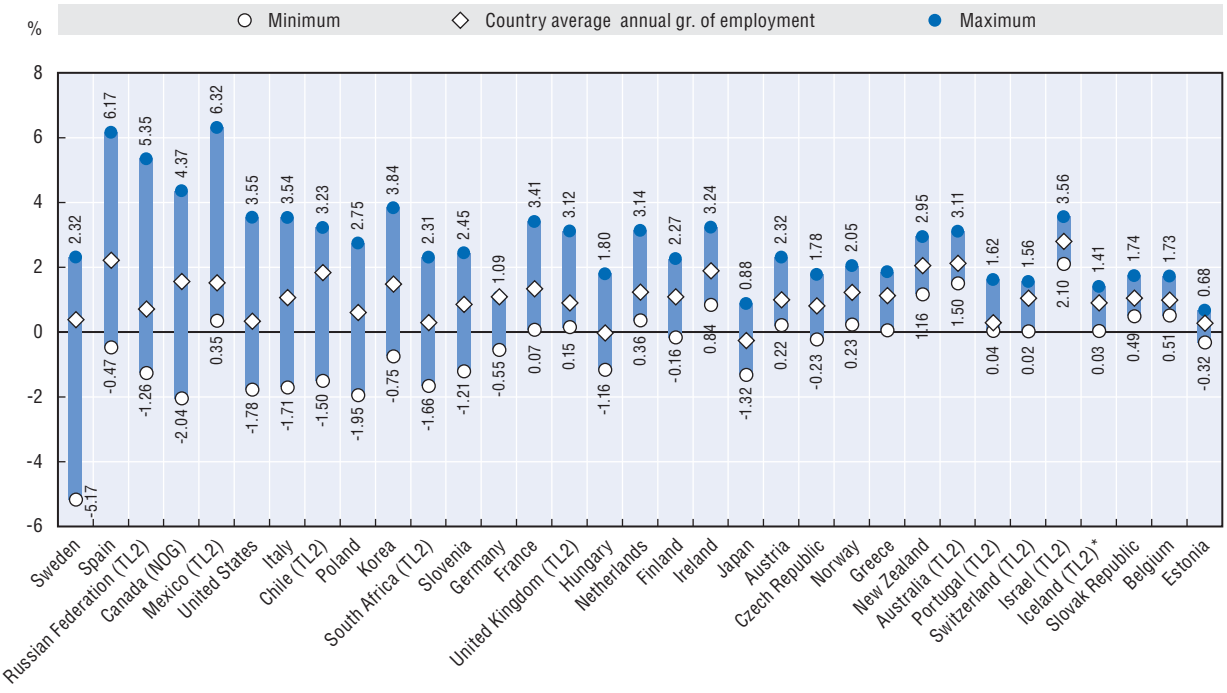
National and regional labour-market responses have varied widely

Perhaps the most striking aspect of the employment situation in the OECD is the degree of variation observed in labour-market responses to the crisis. OECD (2010a) finds that the cross-country dispersion in the change in unemployment rates has been unusually high and that relatively little of the heterogeneity in employment outcomes can be explained by differences in the size of the output shock. This heterogeneity, moreover, is matched at regional level; although it is not clear whether regional-level outcomes likewise show such variation in the relationship between output and employment impacts. Since regional-level national accounts are not yet available for the period after 2007, the analysis of the regional impact of the crisis is, for the moment, confined to labour markets. The variation in unemployment rates across TL2 regions in the OECD in 2009 exceeded the variation across countries and the variation in the rise in unemployment rates during 2008-09 was likewise greater across regions than countries.[1]

On the whole, differences in employment growth have also been greater within countries than across countries. During 1999-2009, average annual employment growth rates across OECD countries ranged between –0.4% and 2.8%, while within-country differences in regional employment growth rates over the period exceeded three percentage points in almost half of the countries concerned (Figure 2.1). In the 24 countries for which the relevant data are available at TL3 level, job creation tended to be slower in predominantly rural regions, although such regions were more likely to have above-average employment rates. This would appear to reflect, in large part, continued

Figure 2.1. **Countries ranked by size of difference in regional employment growth rates, 1999-2009**

TL3 regions



Note: Denmark and Turkey are excluded for lack of data on comparable years.

* The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2011a), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en.*

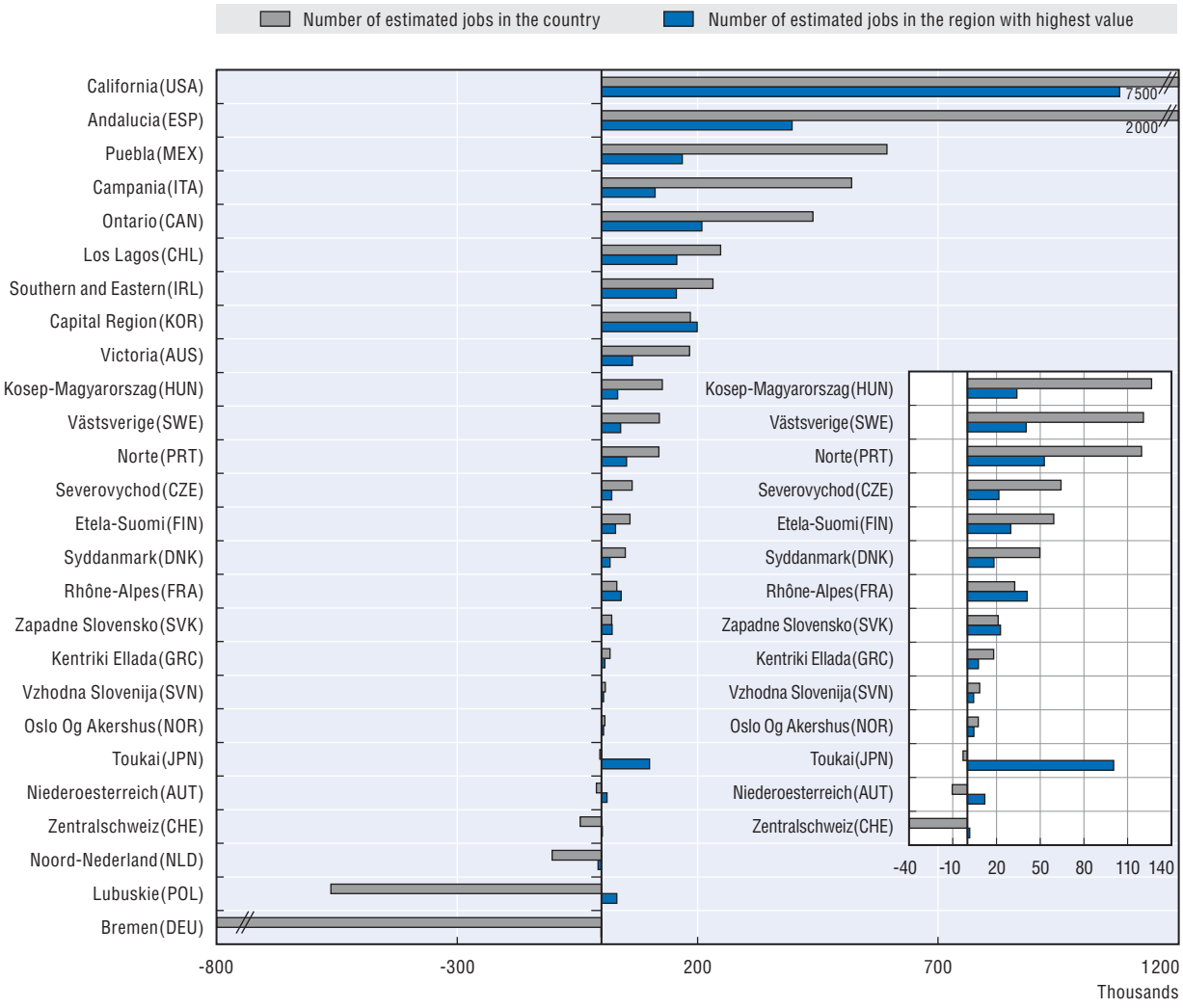
StatLink http://dx.doi.org/10.1787/888932520422

rural-to-urban migration in much of the OECD, as well, perhaps as the greater availability of social support in urban areas. The far greater role of the informal sector in rural economies may also account for some of the difference here: some of the "recovered employment" in rural areas may simply not be captured in the statistics.

A simple way to quantify differences in the labour-market impact of the crisis is to measure how many jobs it would be necessary to generate to return to the employment rates before the crisis. In the United States, for example, around 7.5 million jobs would be needed to return to the employment rate of 2007. Around 14% of these new jobs would be needed in California alone (Figure 2.2). In countries where the effects across regions have been more concentrated, half or more of the employment gap could be filled by bringing only one region back to its pre-crisis employment rate. Even countries that managed to maintain employment rates at or above pre-crisis levels would still benefit greatly from employment growth in their hardest hit regions. All types of regions experienced declining employment, but there were important differences among them: predominantly rural regions appear to have had the greatest difficulty in creating jobs in 2008-09, with an average employment change of –2.4%, as against –1.6% in intermediate regions and –1.7% in urban regions. Predominantly urban regions displayed the largest variation in job losses compared to the previous period, suggesting that the resilience of urban regions to large economic shocks varies considerably across the OECD.

Figure 2.2. **"Job gaps": Estimated number of jobs needed to restore 2007 employment rates**

Country average and TL2 region with greatest job gaps



Source: OECD (2011a), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en.*

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Labour-market outcomes seem to be linked to pre-crisis policies and performance

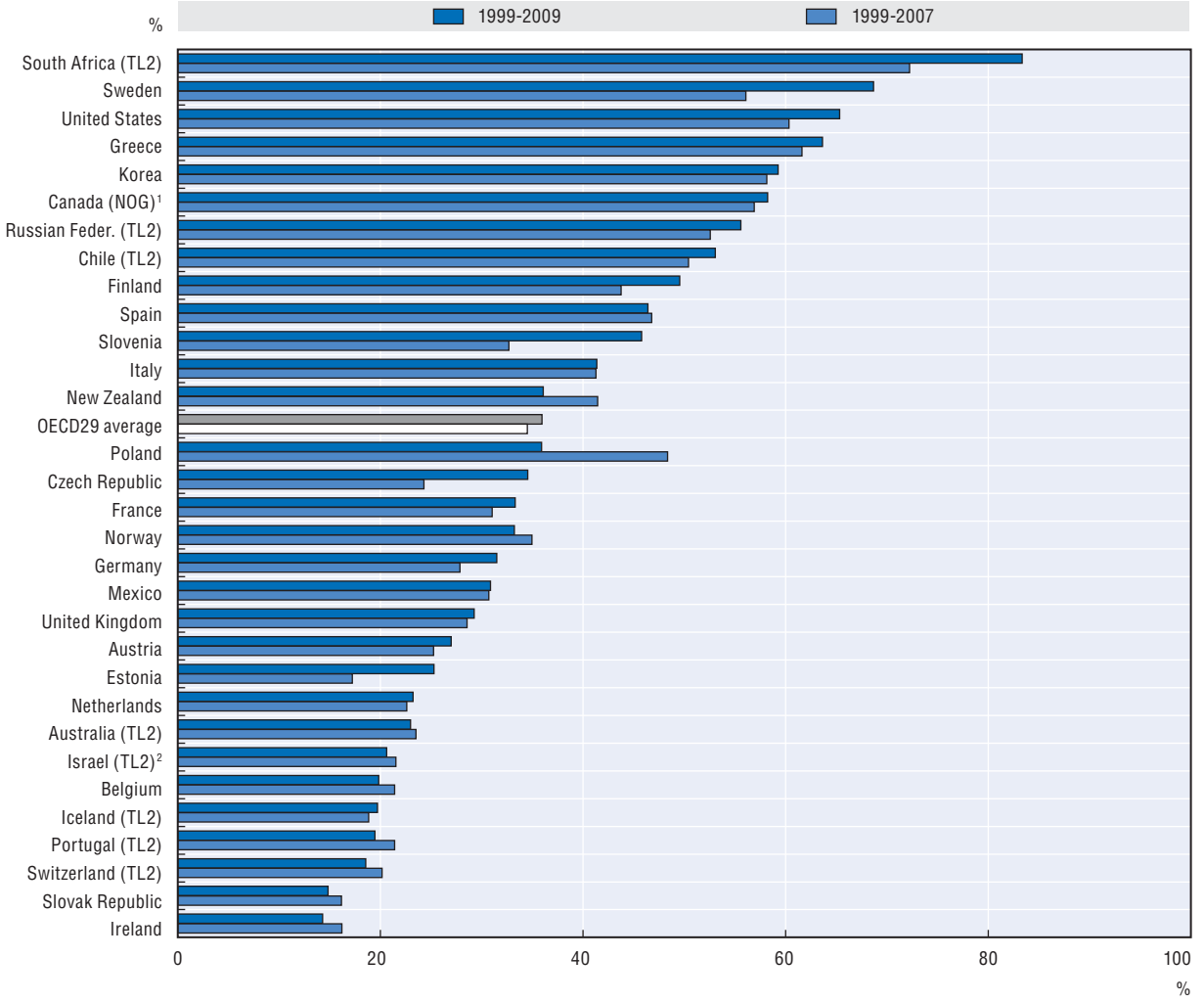
On the whole, unemployment rates in 2008-09 rose faster in regions where they were comparatively low prior to the crisis, reducing within-country disparities in labour-market conditions.[2] This generalisation conceals some interesting differences in trajectories, and it is useful to compare the pre-crisis growth profiles of regions that managed to sustain employment growth during the recession ("resilient regions") with those of regions that shifted from employment growth to employment destruction ("recession-hit regions"):

- On average, recession-hit regions experienced faster growth and greater falls in unemployment from 1999 to 2007, suggesting the presence of structural fragilities in the growth path of this period. Such regions typically saw an increase in the share of employment in financial, real estate and business activities, but not in the productivity of that sector. Moreover, hard-hit regions had larger inflows of young people, who were more exposed to job losses later.

- Resilient regions, by contrast, experienced larger increases in their qualified human capital prior to the crisis, as well as in participation rates and in the productivity of business services, the public sector and agriculture. Such regions also experienced much faster growth of public-sector employment in 1999-2007, suggesting that their employment patterns were less vulnerable to cyclical fluctuations.

Employment creation/destruction, like gross value added, is extremely concentrated in a limited number of regions in most OECD countries (Figure 2.3). On average, 54% of overall employment creation in an OECD economy during 1999-2009 was generated in just 10% of its regions. Moreover, during 2008-09, the regional concentration of employment creation increased in 20 of the 31 economies for which data are available. Job destruction was even more concentrated: on average, 92% of job losses in OECD countries between 1999 and 2009 were concentrated in 10% of regions.

Figure 2.3. **Share of employment growth that occurred in top 10% of OECD TL3 regions, 1999-2009**



1. NOG: non-official grid. Due to limited data availability, labour market indicators in Canada are presented for groups of TL3 regions.
2. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2011a), *OECD Regions at a Glance 2011*, OECD Publishing, *http://dx.doi.org/10.1787/reg_glance-2011-en.*

StatLink http://dx.doi.org/10.1787/888932520460

The evidence suggests that the risk of job losses is much higher for regions with poor human capital, a higher concentration of employment in traditional sectors such as agriculture and construction, and low productivity in manufacturing. These factors also appear to be associated with the persistence of unemployment: poor human capital, skill mismatch and house-price drops (which can impede mobility) can reinforce each other in regional growth traps, increasing the risk that the rise in cyclical unemployment will over time become structural, with high levels of long-term unemployment.

A look at the state of regional labour markets prior to the crisis (2007) reveals that the highest unemployment rates were found in different types of regions in different countries, but that the largest increases in unemployment over the ensuing period occurred mainly in urban regions or in intermediate regions close to large urban areas (OECD, 2010b). In short, the shock in most countries seems to have been concentrated in and around urban areas – either major urban centres or their hinterlands. More remote rural regions appear to have been less affected.

This is consistent with the sectoral employment picture: across the OECD, the largest drops in employment were recorded in manufacturing and construction (see OECD, 2010a). While employment in these sectors tends to be cyclically sensitive, the sectoral data throw up a couple of surprises. First, employment fell more in manufacturing than in construction, even though the latter has historically been the sector with by far the highest cyclical sensitivity of employment and the recession was associated with housing market collapses in some countries. This large shock in manufacturing employment is probably due to the collapse of world trade observed between end 2008 and early 2009. Nonetheless, there is evidence that manufacturing firms in many sectors hoarded labour on a substantial scale through the downturn, particularly in skill- and technology-intensive industries (OECD, 2010a). Moreover, employment in financial intermediation, real estate and business activities – which also tend to be fairly sensitive to the cycle – fell very little, despite the prominent role these sectors played in precipitating the crisis in many countries.

To some extent, the sectoral patterns identified above are reflected in the relative fortunes of OECD regions. In those OECD countries for which regional-level data are available for the most recent period, the size of the increase in unemployment recorded over 2007-09 was positively correlated with the employment share of manufacturing and negatively correlated with the employment share of services (OECD, 2010b). In some countries, like Spain, there was a close correlation between the pre-crisis share of employment in construction and the subsequent rise in the unemployment rate, reflecting the degree to which the bursting of property bubbles hit the labour market (OECD, 2010c). In the United States, county-level data shows a similar picture (OECD, 2010b).

Labour markets in many regions are unlikely to recover quickly

It is impossible at this stage to assess the degree to which the current cyclical spike in unemployment will result in longer term increases in structural unemployment. However, OECD (2010a) concludes that the risks vary from country to country. In general, unemployment persistence appears to be longer in countries where product-market regulation is less supportive of competition and long-term unemployment benefits are more generous. Such effects tend to be weaker where greater use of active labour-market policies helps to maintain labour-market attachment (Furceri and Mourougane, 2009; Guichard and Rusticelli, 2010). The effects of stringent employment-protection legislation (EPL) are less clear: there is good evidence that it impedes worker reallocation, which would

tend, *ceteris paribus*, to increase long-term unemployment, but its net impact on job creation and destruction over the cycle may not depress employment overall – EPL is an impediment to job destruction as well as to job creation. Some evidence suggests that its impact is sector-specific (Messina and Vallanti, 2007; OECD, 2010a).

That said, there are reasons to believe that unemployment persistence following the crisis may prove to be greater for some countries that have previously exhibited relatively weak unemployment persistence:

- Economic downturns that are associated with financial crises tend to have a larger impact on unemployment, partly because such crises have a larger impact on gross domestic product (GDP) but also because they reduce the ability of firms dependent on external finance to retain workers (Sharpe, 1994; Reinhart and Rogoff, 2009; IMF, 2010). During the ensuing recovery, heavy debt burdens further constrain their ability to increase employment as growth resumes.
- The expectation of a relatively weak recovery implies that larger numbers of workers will suffer long spells of unemployment, with all that this implies in terms of skill degradation, labour-force withdrawal, etc. Effective active labour-market policies (ALMPs) will be needed to limit the extent to which cyclical unemployment becomes long term and ultimately structural.

In addition to these economy-wide factors, there are specific regional dimensions that may contribute to unemployment persistence. House-price collapses and negative equity problems are likely to reduce worker mobility in many regions for some time to come, contributing to mismatches on the labour market. It is noteworthy that in some countries with exceptionally large employment losses relative to the output shock, a large proportion of homeowners have found themselves with negative equity or in markets where it would be very hard to sell their housing except at a substantial loss. The labour-market implications of this state of affairs are fairly clear (OECD, 2011a) but the extent of the impact appears to vary (Box 2.1). IMF (2010) observes that skill mismatches and house-price drops across the United States do show a distinct regional pattern, one that suggests that the two are self-reinforcing. Causality, in all likelihood, runs both ways – other things being equal, house prices will fall further (and negative equity problems grow more) where labour markets are weak, and labour-market adjustment will be impeded by negative equity-induced worker immobility. This is likely to be the case in many other OECD regions that have experienced boom-and-bust cycles on property markets. Comparable data for other OECD economies are not available, but it is clear that homeowners in a number of other countries have also been hard hit, including Ireland, Spain, Sweden and the United Kingdom.

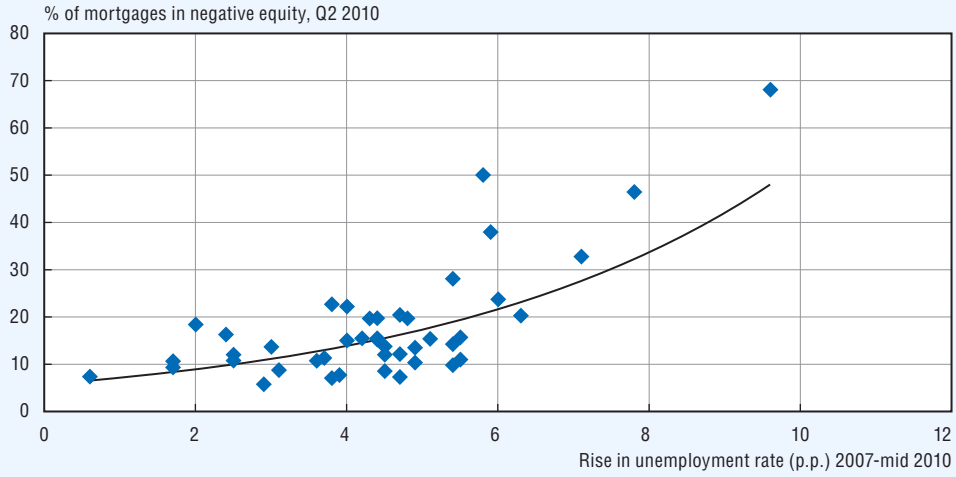
As a rule, jobs that have been destroyed usually differ from those being created, in terms of skills and/or location. Since workers are not perfectly mobile, unemployment can be generated by skill or spatial mismatches between local labour and available work. In normal circumstances, this unemployment would be largely frictional, but where barriers to mobility exist, it risks becoming structural if skill mismatches are not addressed. This points to the importance of effective ALMPs to assist the mobility-constrained unemployed where they are without tying them to where they are: such programmes need to be designed to avoid lock-in, which can reduce labour mobility still further. The risk that such unemployment turns structural is likely to be greater still where local economies have been hit by major and lasting shocks, as the damage done to one or more key sectors can have indirect and induced effects on demand for labour in others.

Box 2.1. **Negative equity and unemployment in the United States**

In the United States, an estimated 23% of residential properties with mortgages (roughly 11 million) were in negative equity in the second quarter of 2010 and a further 4.9% (2.4 million) had less than 5% equity.[1] In principle, negative equity not only drives foreclosures, it also impedes labour mobility, since it is difficult for homeowners to move to where jobs are if they cannot afford to sell.[2] Using US data, Ferreira *et al.* (2008) show that negative equity can indeed lock workers into a location, and recent data on unemployment rates and negative equity suggest a strong relationship between the two (figure below). IMF (2010) estimates that the house-price collapse has added between 0.5 and 1.25 percentage points to the US equilibrium unemployment rate (equivalent to roughly one-quarter of the rise in US unemployment over 2007-09), making it an even more important factor than skill mismatches.

Negative equity and unemployment

US state-level data



Source: OECD calculations using data from CoreLogic (2010), *Negative Equity Report Q2 2010*, 26 August, *www.corelogic.com/uploadedFiles/Pages/About_Us/ResearchTrends/CL_Q2_2010_Negative_Equity_FINAL.pdf* and the US Bureau of Labor Statistics.

StatLink http://dx.doi.org/10.1787/888932520479

The strength of the labour-market impact of weak housing markets depends to a great extent on precisely which groups are most affected by house-price corrections or negative equity problems, as well as on whether and to what extent indebted homeowners can simply cut their losses and "walk away" from negative equity via "strategic default" (Krainer and LeRoy, 2010; Schulhofer-Wohl, 2011). Assuming that defaulting homeowners simply turn over the property to the lender with no further obligation or cost, the attractions of strategic default depend on the current market value of equity, expectations about house-price movement and the transaction costs of default (particularly moving and the cost of a severely damaged credit rating, which may make it harder to find even rented accommodation). House-price movements still matter, however: Schulhofer-Wohl (2011) finds a significant impact on the mobility of those with positive but much-reduced equity. The data for a comparative analysis are not available, but one would expect significant variation in the extent to which the most vulnerable groups in the labour market had mortgages. In the United States, where subprime mortgage lending was one of the

Box 2.1. **Negative equity and unemployment in the United States** *(cont.)*

important causes of the crisis, it is not surprising that the two move together. In Ireland, by contrast, Duffy (2010) finds that individuals with mortgages are on the whole employed in sectors where employment prospects have so far remained relatively robust. Negative equity there would still be expected to affect labour-market efficiency – individuals in employment are mobility-constrained if their mortgages are under water, no less than the unemployed – but it would not be so closely associated with rising joblessness. In the United States, at least, there is little doubt that negative equity is highly concentrated geographically: CoreLogic (2010) estimates that five states had more than one-third of residential properties with mortgages in negative equity in the second quarter and a further half-dozen had negative equity rates of 20-30%.[3]

1. This was in fact below the peak of 24% in late 2009, but the improvement resulted from foreclosures rather than the stabilisation or recovery of prices in some markets. See CoreLogic (2010).
2. See also Frey (2009) and OECD (2011b) on the sharp slowdown in US mobility rates.
3. Nevada (68%), Arizona (50%), Florida (46%), Michigan (38%) and California (33%).

Area-based strategies to exit the crisis and create jobs that last

Policy responses to the recent surge in unemployment across the OECD area have included increased funding for active labour market policies, support for companies implementing short-time working, and fiscal stimulus for job creation in the public sector. While these interventions have proven effective in helping firms and employees ride the crisis, their impact is expected to be of limited duration. To lay the foundations for a more sustainable economic future, actions are needed at the national, regional and local levels to support a structural adjustment conducive to more and better jobs. The OECD Local Economic and Employment Development (LEED) Programme has looked at what has been done since the crisis hit, and at what might be done, in order to put in place approaches to employment and skills that are better oriented towards the longer term economic development needs of local communities and the competitiveness of national economies.

Area-based labour-market policy responses have played a role in the crisis recovery

In response to the crisis, national governments have put in place a number of measures in the field of employment and training policy, reinforcing social nets, and scaling up the resources for ALMPs aimed at helping jobseekers find work. Significant injections of capital as part of stimulus packages have led to job creation at the local level, both in the public and private sectors. Work has also been undertaken directly with firms to retain vulnerable employees, for example by helping companies implement short-time working schedules. Such actions by national governments have also been matched by actions to invest in employment and skills at the local level. Box 2.2 provides an overview of where there has been a strong regional and local dimension to these actions.

A recent review of local responses to the crisis[3] finds that some "at risk" groups appear to be less targeted by locally-based initiatives to date. While local job employment agencies may find it best to use their limited resources to help the "easier to reach", in order to get people back into employment quickly, they cannot afford to neglect harder-to-reach groups who are likely to lose skills and motivation through longer term unemployment. It is

Box 2.2. **A review of local responses to the employment crisis in OECD countries**

Better matching services. Governments have been putting in place activities to quickly match displaced people to new jobs through "one-stop shops" and "emergency desks" at local levels. In some countries the private sector and unions have been strongly involved in initiatives to facilitate "work-to-work" transitions. In the Netherlands, for example, the government has established 30 mobility centres to promote co-operation between companies, trade unions and job-finding organisations helping displaced workers to find new employment.

Investment in education and training. In previous downturns, much investment was aimed at helping displaced workers to retrain for employment in new and emerging sectors. Such retraining continues today, particularly in "disadvantaged regions", but communities are also focusing on broader schemes to upgrade skills and keep people economically active, especially youth. For example, the Italian region of Trento has set up training programmes to maintain professional skills among vulnerable local employees through support to firms.

Job creation. Many OECD countries have introduced stimulus packages which have had an impact in creating jobs at the local level, in both the public and private sectors. In Japan, for example, regional employment creations were set up to revitalise regional industries and create services such as meal distribution services for the elderly, and childcare. A special subsidy was made available for local governments that temporarily hired job leavers. In addition, local and regional governments in OECD countries are seeking to support job creation through other routes, such as stimulating entrepreneurship and social entrepreneurship, which may be more sustainable in the long term. For example, the Flemish government in Belgium invested EUR 7 million to create a Social Investment Fund to reinforce the social economy sector.

Support for business to raise productivity. A number of localities and regions have put in place schemes to invest in the productivity and adaptability of local industries to ensure that they are less vulnerable to economic downturns in the future. For example, the city of Milan in Italy launched a Programme for Innovation supporting innovative research and development projects in information and communication technology (ICT), fashion, energy and food sectors, undertaken by young entrepreneurs. The programme was co-financed by the Chamber of Commerce, city universities, the National Research Council and the Province of Milan Firms Association.

Building local capacities. National governments have sought to build capacities at the local level to deal with the higher numbers of active job seekers. There has also been an emphasis on increasing co-ordination at the local level to create a joint approach to rebuilding local economies. Thus, the Australian government temporarily appointed "local employment co-ordinators" in selected regions to help drive joined-up local responses to unemployment.

particularly vital for the resurgence of local economies that older workers are not encouraged to leave the labour market through early retirement. In addition, unemployed immigrants may leave communities if they are not helped to regain appropriate employment, meaning that skills and talents will be lost and there could be increased risks of skills shortages in the future.

Setting the stage for better jobs in the recovery: How to put in place jobs that last

Drawing on over three decades of research in local employment and economic development policy, the OECD LEED Programme has identified a series of priorities which should underpin such actions (Froy and Giguère, 2010a). These include:

- Creating an adaptable skilled labour force.
- Better utilising skills in the local economy.
- Supporting employment progression and skills upgrading.
- Gearing education and training to emerging sectors.
- Putting in place good local governance.

Applying these principles will be challenging in the context of widespread public budget cuts. The discussion that follows focuses on how this can be done.

Building a skilled and adaptable labour pool

The communities that are recovering the quickest from the recent downturn are those that have a labour force that is adaptable to external trends and shocks. Cities are particularly well placed in this respect, given that they are less vulnerable to collapse in any particular sector. Cities also attract highly skilled people, who are more likely to be able to adapt to new economic opportunities as they arise. However, all localities can work towards making their labour force more flexible and adaptable to change. Adaptability needs to be considered at a number of different levels (Simmonds, 2009). National governments set the legal framework for employers and trade unions but adaptability also happens at the level of local communities. Employers and other stakeholders need to be empowered and incentivised to innovate and introduce change. There are a number of ways that governments can encourage local economies to be more adaptable, but the skill levels and employability of the workforce is a key driver. The local labour pool is one of a region's most important assets – in terms of ideas, innovations, talents, skills, specialisations, culture, methods and approaches to work (OECD, 2005; Giguère, 2008).

Producing greater adaptability requires a dual approach by local public agencies. First, they need to ensure that workers have a good stock of higher-level generic skills (the ability to analyse, problem solve, communicate well, be creative) and, secondly, they need to invest in flexible systems of training where people can learn more specialist skills throughout their working lives. Generic skills are increasing in demand in today's "knowledge-based economy". Florida (2002) has argued for the rising importance of the "creative class", people who are able to solve problems and innovate across a broad range of disciplines. New technologies such as the Internet encourage greater circulation of information, increasing the need for higher-skilled people to analyse this information and transform it into valuable knowledge. However, it is not just those at the top of the employment ladder who need these skills. Increasingly those involved in "routine work" (*e.g.* salespeople) can bring benefits to firms by being able to solve problems and process information in their communication with customers. It is increasingly understood that in order to promote productivity, there is a need for incremental innovation – learning by doing – across the workplace. While the services sector has long valued communication skills and the ability to adapt to customer needs, comparative advantage in manufacturing is increasingly found in good design, creativity and the ability to customise products to reflect consumer preferences. Generic skills allow workers to contribute to innovation and creativity, whilst also being less dependent on their technical skills for future employment.

Good generic skills are learned early in life, so investing in pre-school and school-age education is obviously of principle importance. However, not all children benefit equally from education. Children from disadvantaged backgrounds, or those with language barriers, may need extra support in learning. Early childhood education can be a significant boost for children who do not benefit from high levels of parental investment in education and/or risk having language barriers when they enter mainstream schooling (OECD, 2011b). While it is more difficult to learn generic skills later in life, investment in higher-level generic skills can also benefit individuals through post-secondary education (including vocational training); for example, additional courses in communication, leadership, entrepreneurship and management.

At the same time, people need to be able to access employment and training systems throughout their working lives to build more specialised skills and respond to changing skills demands. OECD (1996) points out that it is no longer feasible within today's constantly changing economy to survive with a "front-end" model of education and skills formation – learning must be a lifelong process. Although the term "lifelong learning" is now well known across OECD countries, it is still rare to find comprehensive systems of lifelong learning in practice, particularly those that are well embedded within local economies. In practical terms, lifelong learning means opening up education and training systems to new target groups (working adults, older people) and ensuring that it is accessible to those with other demands on their time (*e.g.* heavy workloads and family responsibilities). Employed people require training which is intensive and either adaptable to employer needs (when provided during working hours) or available outside working hours. Older people may need specially tailored training which takes into account the fact that their school-age education was acquired in a different economic and technological era.

Low-skilled adults are generally less likely to access training, and this situation is often exacerbated for individuals whose labour-market attachment is weak. Many communities are faced with the need to respond to a "stagnation of participation" in education and training amongst the lower skilled. Part of the problem appears to be that disadvantaged groups have become disillusioned with a system of schooling that they believe failed them, meaning that a new approach to training and education is needed. Local agencies are increasingly experimenting with new types of learning opportunities, which can be accessed from home and from a variety of different institutions and outreach settings. Music, sport and cultural activities can be a useful way to create learning opportunities that are not seen as specifically "training based". In addition, "practice firms" and work experience placements can be good opportunities to learn new skills outside a traditional educational environment.

One issue which affects unemployed people in many OECD localities is the lack of longer term training, the availability of which could significantly improve employment outcomes. Public Employment Services (PES) often fund relatively short, low-intensity courses that do not produce long-term sustainable outcomes. Greater collaboration is needed between employment agencies and educational institutions to ensure meaningful skills upgrading for unemployed people, with new mechanisms for funding more resource-intensive training.

The role of the private sector in providing training to their own staff cannot be underestimated, even if all firms cannot contribute to skills development in the same way. Large firms are well equipped to upgrade the skills of their labour force through formal

training plans and organisational training platforms but small and medium-sized enterprises (SMEs) may require support from the public sector in establishing customised training which works across different workplaces and in facilitating other forms of knowledge-sharing (OECD, 2006a, 2008).

Before the economic downturn, many communities were actively seeking new talent to fill skills shortages, so much so that they were starting to compete to make themselves more attractive to newcomers. Given current demographic trends, it is highly probable that migration will continue to be seen as a useful means of building a successful local labour pool. Even now, immigrants can do much to refuel the return to growth, bringing with them international connections, a tendency towards innovation and entrepreneurship, and a willingness to work hard in difficult conditions as they become properly established in the labour market. However, it is essential that support for immigration is accompanied by strong systems to integrate newcomers. Adapting skills to new labour markets is a resource-intensive process – local agencies need to put in place tools and instruments for recognising qualifications and skills gained overseas and providing specialised language instruction (see OECD, 2006b; Froy, Giguère and Hofer, 2009). In addition, it is important that local policy makers do not prioritise immigration to the extent of neglecting indigenous populations that are disadvantaged in the labour market, including the children of immigrants, and in some cases, their children's children, who continue to have poor labour-market outcomes. Ensuring that the workforce development system is open to all local people will be vital in order to avoid the development of a two-speed economy involving the "skills rich" and the "skills poor".

Given the diverse set of factors which influence skills levels, policy makers are increasingly seeing the value of investing in broad local skills strategies, involving a variety of different local partners. A review of local practice in OECD countries (Froy, Giguère and Hofer, 2009) shows that in addition to investing in school-age education, such strategies often focus on three main types of action: attracting and retaining talent; integrating disadvantaged groups into the workforce development system; and upgrading the skills of the low qualified. Table 2.1 provides a summary of different objectives and actions within balanced local skills strategies.

Better utilising skills and improving the quality of local jobs

To counteract high/rising unemployment, there is currently a drive towards job-creation support measures at the local level in OECD countries. It will be important in the longer term, however, to create real and sustainable jobs, not just any jobs. Public sector actors also need to concentrate on the quality of jobs available in the labour market. While national economies prospered in the years before the crisis, through strong job growth, this disguised an inherent problem in the large-scale creation of relatively unproductive jobs. Such jobs kept people in employment, at least temporarily, but they have also had a number of adverse effects. They provided relatively low-paid employment, creating a section of society that could be classed as the "working poor". Net wages and income stagnated for a large proportion of the population while income inequalities increased. Fitzgerald (2006) finds that "work that could be defined as professional or paraprofessional, with skills, salaries and career trajectories to match, has been broken down to be performed instead by low-wage, high-turnover employees". At the same time, the easy availability of employment discouraged people from investing in their own long-term education and training, causing youth to leave education and training early, to

Table 2.1. **Objectives and actions within balanced local skills strategies**

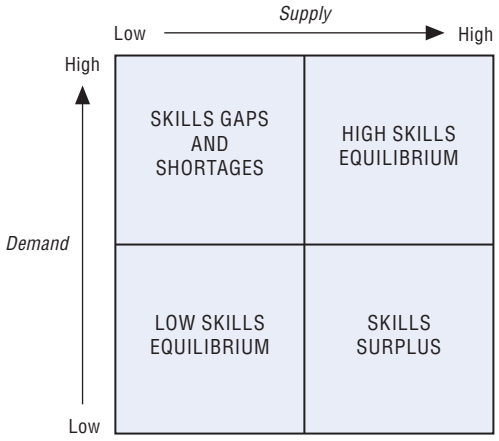
Strategic objective	Action
Attracting talent	Invest in local quality of life, architecture, cultural development and effective city planning. Promote cosmopolitanism and diversity. Develop universities and training institutions. Encourage university graduates to stay in the area (careers advice, etc.) and develop post-graduate courses. Market localities, regions, local sectors, and clusters to attract new labour. Provide incentives for returning migrants, *e.g.* recognition of overseas qualifications, grants to set up new businesses.
Integrating disadvantaged groups	Set up outreach training centres/information technology (IT) kiosks, market education and training opportunities for hard to reach audiences, improve the provision of early childhood education. Establish alternative forms of learning, *e.g.* practice firms, work experience, mentoring, culture, sport and music schemes. Set up support mechanisms to improve retention during training courses, apprenticeships and employment. Provide adult career advice and develop better linkages between basic skills courses and higher-level training. Provide specific support for immigrants, ethnic minorities, Aboriginal populations (*e.g.* anti-discrimination, recognition of qualifications, skills audits, language training). Provide adult basic skills training (*e.g.* literacy and numeracy).
Up-skilling and skills upgrading for those in employment	Customise training for local employers. Develop career clusters and career ladders. Establish business-run training centres, encourage major industries to provide training on their premises which is open to other firms, including SMEs. Set up centres of excellence for particular sectors. Encourage businesses to provide career planning and mentoring for new starts. Set up partnerships to share innovation and promote technology transfer, and management training on different aspects of work organisation.

take up employment. This may have produced financial benefits in the short term, but in the long term, career prospects and overall incomes are likely to be negatively affected by such choices. The "work first" attitude has also penetrated public institutions, with the public employment service often quick to match clients to available jobs, as opposed to helping them invest in their human resources and skills and move towards more sustainable long-term careers.

At the same time, to build more sustainable local economies, local employment agencies need to work with employers to ensure that they make full use of the talents and skills available locally. By improving both productivity and skills levels, employers will maximise the utilisation of the local pool of talent and improve job opportunities, enhancing the competitiveness of the local economy. While the private sector may have been reluctant to work with public agencies on issues of productivity and work organisation before the downturn, there is now more willingness to work in partnership to bolster the strength of local industries. Even before the slowdown, many businesses were eager for more support in maximising productivity: in a poll of American Chamber of Commerce executives conducted by the OECD's LEED Programme in 2008, 68.3% felt that workforce development agencies should have some role in helping businesses to tackle productivity issues, with 28.6% favouring a strong role.

Tackling these issues is particularly important in certain OECD communities and regions, particularly in more isolated rural areas. Green *et al.* (2003) propose a useful typology to understand the complex relationship between skills and supply in different regions. According to this typology, regions broadly fall into four categories (Figure 2.4). In the context of demographic change and mobility, many communities found themselves

Figure 2.4. **Moving from a low- to high-skills equilibrium**



Source: Froy, F., S. Giguère and A. Hofer (eds.) (2009), *Designing Local Skills Strategies*, Local Economic and Employment Development (LEED), OECD Publishing, *http://dx.doi.org/10.1787/9789264066649-en*, adapted from Green, R., R. Gregory and R. Mason (2003), "It's No Picnic: Personal and Family Safety for Rural Social Workers", *Australian Social Work*, Vol. 56., No. 2.

experiencing skills gaps and shortages before the downturn (the top left quadrant of Figure 2.4). In others, a low supply of skills is matched by a low demand for skills among local employers – the low-skills equilibrium.

Not all businesses and not all communities progress as fast as others in terms of adopting new technologies and adapting to changing markets. Coyle (2001) identifies a lag time of roughly 50 years between the development of new technologies and the ability of societies and economies to fully take advantage of the potential they offer to improve productivity. In the meantime, some employers can achieve competitive advantage by keeping skills levels, and therefore salaries, at a minimum. Where such employers become concentrated in a particular region, a vicious circle can develop: it does not pay individuals to remain in education if local companies are not seeking higher-level skills, while managers will be less likely to raise productivity and better utilise skills if there is a lack of well-educated workers in the locality.

This presents a challenge for policy makers. Improving the supply of skills locally is risky, unless simultaneous attempts are made to improve demand, as this may produce a skills surplus and consequent brain drain. In such cases, local policy makers often become diverted towards "fire fighting" to fill labour shortages, as opposed to skills shortages. Labour shortages occur when vacancies remain unfilled either due to a sheer lack of local people to fill them, or because people are not attracted by the pay, wage and contract provisions, or working conditions. These labour shortages are often resolved through recourse to immigration, meaning that policy makers do not have an eye on the longer term strategic need to improve the quality and knowledge intensity of the employment on offer and to increase the attractiveness of the labour market to residents and newcomers alike.

Thus, while helping employers fill vacancies is important in the context of the downturn, it may not always be the best way to help the economy develop over the long term. Sometimes, if there is no supply for a given labour demand, it is a signal that the method of production of the good or service is unsustainable and that the employment in question is not viable in the longer term. When public employment agencies "fire fight" to

fill such vacancies, they are subsidising business activity in a way that leads to poor use of public resources (particularly as such placement often leads to poor job retention and labour-market "churning"), while also contributing to low productivity and impeding needed restructuring.

It can be difficult for the public sector to advise business on productivity issues, and in many countries there is a "credibility" gap which needs to be filled before policy makers can successfully get involved in this area. While the public sector is very familiar with some of the themes under discussion – in particular the management of human resources – it often does well to work with intermediaries on more technical issues. In South-East Lincolnshire in the United Kingdom, for example, a local university campus led the development of a Food Industry Technical Training Partnership, which was instrumental in up-skilling local workers and raising local productivity through sharing innovation and promoting technology transfer. While the partnership provided formal training to people working within local industry, it is perhaps the informal exchange of experience and knowledge which was the most useful in encouraging employers to "raise their game" and increase their productivity.

Ultimately, local policy makers will benefit from ensuring that local skills strategies address both the supply and demand for skills (Figure 2.5). In Australia, a skills ecosystem approach has been developed which provides a useful model for policy makers seeking to build such integrated approaches. These pilots, which began following a review of vocational training policy in 2001 (Buchanan *et al.*, 2001), focus not only on how skills can be developed, but also how they can be deployed. In the skills ecosystem model, skills shortages are seen to be as much about work organisation and turnover as about problems with the supply of skilled people from education and training institutions. Rather than responding automatically to labour shortages by creating new training courses, policy makers should first assess the causes of those shortages. The question is always asked – is there a skills shortage because of a lack of training, or is it rather that local jobs are

Figure 2.5. **Balancing strategic priorities regarding the supply and demand of skills**

Source: Froy, F., S. Giguère and A. Hofer (eds.) (2009), *Designing Local Skills Strategies*, Local Economic and Employment Development (LEED), OECD Publishing, *http://dx.doi.org/10.1787/9789264066649-en*.

unattractive and therefore cannot retain staff? Since the introduction of the scheme, several Australian states have developed their own schemes: Queensland has now developed 60 ecosystem projects. In France, a strategy for the more proactive management of employment and skills at local level (*Gestion prévisionnelle des emplois et des compétences territoriales* – GPEC) was launched in 2008, following a national inter-sectoral agreement. The strategy envisages a strong link between: *i)* firm-level business plans; *ii)* local community socio-economic strategies; and *iii)* the career plans of local individuals. The strategy seeks to act in the longer term to improve both the skills levels of the local population and work organisation within firms.

Employment progression and careers definition

Working with employers on skills utilisation is important, but it is also vital that employers are encouraged to provide up-skilling opportunities to their staff, so that lower-skilled workers can progress over time and access better job opportunities. OECD (2006a) finds that employers are particularly unlikely to invest in the training of low-skilled staff – not least because they are increasingly employed on a temporary basis. Many jobs are temporary, and it can be difficult for employers or employees to see how one job may lead to another higher up within the job hierarchy. This affects the incentives of both to invest in the employee's skills. A new "career pathways approach" which has been developed in the United States in recent years offers a mechanism for overcoming such barriers. In cities like New York, public institutions have been working together to recreate traditional career ladders externally. For example, customised training courses are linked together to form "career pathways initiatives" for low-paid workers, often jointly funded by the private and public sectors (see Froy, Giguère and Hofer, 2009). The main components of the career ladder approach include defining appropriate training with industrial consortia and colleges; adapting training to the needs of working adults; linking training to career transitions, from entry-level to higher-level workers; and disseminating information through adult-oriented careers advice.

While career ladders can support progression in individual industries and sectors, it is also helpful to build horizontal links across sectors, to create "career clusters" at a local level. This approach recognises that the generic skills which make people employable in today's economy extend across many different sectors, and with the right technical training, people can progress by moving horizontally as well as vertically. The US Department of Education, for example, has created a "career clusters" initiative, which has been adopted by many states and regions, and customised to their local labour-market needs. A career cluster is a grouping of occupations and broad industries based on commonalities. Job profiles are mapped across an entire industry so learners and workers can see how different careers interact and rely on one another. Within each career cluster, there are anywhere between two to seven career pathways from secondary school to college, graduate schools, and the workplace. They enable low-skilled low-income workers to make connections to future goals and offer them series of related courses. The network of clusters is overseen by the National Association of State Directors of Career and Technical Education (vocational training) and delivered through a partnership approach involving state, schools, educators, employers, industry groups, and other stakeholders (Froy and Giguère, 2010b).

Independently of this initiative, the city of Chicago has developed a cluster approach to training needs in the manufacturing industry called the Manufacturing Skills Program (MSP). This project has been operating since 1991 and combines a strong focus on the training needs of the local manufacturing sector (particularly metalwork, woodwork and electronics industries). By working with employers on occupational profiling and developing skill standards for different jobs, the Jane Addams Resource Corporation has helped companies create internal job ladders, benefiting workers regardless of whether they participate in the training programmes, because they subsequently have a clear path towards advancement within the firm. In addition, the organisation's interventions have helped firms to employ their human resource assets more effectively (OECD, 2006a, 2008).

A sector/cluster approach is useful not just to link people to training, but also to help in matching people to jobs. In Flanders, Belgium, the public employment service has been working directly with the city of Antwerp to support employment access and progression within key areas of the local economy, namely the tertiary sector, construction, logistics, industry, the hotel, restaurant and catering sectors, and creative industries. Bringing together education, labour market and sectoral partners makes it possible to approach employment bottlenecks in a comprehensive fashion, while also supporting access to career progression by lower-skilled people.

Fostering and anticipating new areas of growth

At the national and international levels, efforts are being made to predict where new jobs are likely to be concentrated in the future. Such forecasting is also happening at the local level, although it is difficult to make accurate predictions with any certainty. Diversification and adaptability at the local level may be more important in responding effectively to change. At the same time, there are areas of the economy which will undoubtedly grow in the coming years, and for which communities would be wise to prepare their workforce. These include jobs requiring green skills and health/social care.

The transition towards a greener economy offers an opportunity for governments, businesses, unions and civil society to work together to reduce environmental pressures, while tackling economic and social exclusion (OECD, 2009). The LEED project on Climate Change, Employment and Local Development confirms that partnerships can play a key role in facilitating and managing the transition of local labour markets to the green economy. They can act as a catalyst for new market opportunities, while increasing communication with business, raising awareness of the opportunities surrounding green growth and improving policy definition. The region of Styria, in Austria, for example, illustrates how a region can work through public-private partnerships to foster the development of the green economy and drive eco-innovation (OECD, 2010c).

As the green economy continues to expand, skills shortages may occur, ranging from low-skill, entry-level positions (*e.g.* machinists) to high-skill higher-paid jobs (*e.g.* engineers). However, while some sectors will gain from the transition to green technologies, others may experience job losses or job shifts (OECD, 2009d). Employment and skills policies will need to smooth this transition.

As green growth is a relatively new area for policy, many localities are starting work by mapping the greener sectors in their local labour markets and seeking to understand their skills needs. The TransverS'AL platform launched by the South Alsace region in France is one example of such an approach. The employment office of Mulhouse undertook a

mapping of existing, emerging and potential sectors in the green economy in collaboration with trade unions, training institutions and the sector federations. This was combined with an assessment of the skills currently used and the future skills required in each of the sectors (both shrinking and expanding). An important dimension of the approach was a focus on transferable skills – for example, the TEXBAT project identified how skills that had traditionally been used in the textile sector (which is shrinking) could be utilised within the green construction sector (which is expanding), and identified relevant training programmes to facilitate this process.

The transferability of skills from other shrinking sectors such as steel and automobiles has also been assessed (Miranda *et al.*, 2011). The US state of Michigan, whose automobile industry has been particularly badly affected by the downturn, has launched an initiative to better define the nature of green jobs and their importance to the state. The survey identified over 109 000 private sector green jobs in Michigan. This represents just 3.4% of total private sector employment, but the growth potential is estimated to be very high. In order to provide additional skills training, Michigan has established an Academy for Green Mobility, a partnership between government, automotive manufacturing industry employers and education and training providers to help prepare individuals to move quickly from jobs on traditional gasoline-based vehicles to advanced propulsion vehicles that use green technologies and applications. Michigan has also put in place sectoral strategies in health, which is also growing as an employment sector in the context of the ageing population. Nine of the 13 initial alliances launched under the state's Regional Skills Alliance scheme are focused on healthcare. The Regional Skills Alliance programme is intended to improve the efficiency of local workforce development and educational systems in meeting firms' needs.

Population ageing has also prompted many communities to see the social care sector as a major employer in the future. Traditionally, jobs in this sector have been low-paid and often temporary in nature, leading to skills shortages. There is a strong gender bias, with an important concentration of women in the sector. The pay and conditions do not always reflect the emotional and communication skills required to deliver quality care, and there have been calls to raise job quality as a means of attracting new people into the sector. For example, one of the skills ecosystem projects in Queensland, Australia, has focused on the elderly care sector: the "Queensland Aged Care Skills Formation Strategy" is a state government initiative bringing together government, industry and registered training organisations to address skills shortages. The shortages are believed to be rooted in a lack of career-development opportunities in the sector, a lack of established support and development mechanisms, and the failure to use the skills and knowledge of workers fully. The strategy focused on education and training, workforce management, job design, industry image and industrial relations. The roles for health assistants were redesigned and training and career pathways were developed which were consistent across the spectrum of care (QCS&H ITC, 2006).

Outside of these key sectors there will be many different avenues for growth and development in the coming years. Spotting new opportunities is a continual process, and the fostering of a local entrepreneurial culture with robust support for new and emerging firms has been shown to aid the process of growth and regrowth. Building a knowledge base and regularly collecting local labour-market information can also play a crucial role in identifying emerging employment sectors and training needs. It is important for

communities to focus investment on areas in which they will have a comparative advantage. Local policy makers should ideally seek to promote "flexible specialisation" – concentrating on certain sectors, but evolving these in response to market needs.

Good local governance

Implementing effective policy interventions at a time when public budgets are being squeezed will be challenging. Every initiative implemented now needs to be carefully justified. In such a context, it is particularly important that funding is not dissipated and fragmented but brought together to achieve concrete local priorities. Governments intervene in myriad ways at the local level, but rarely are these interventions co-ordinated effectively. National initiatives will have a limited impact if policies are fragmented, services are duplicated, and agencies do not communicate with each other. Better aligning local policies and eliminating duplication and waste is not easy. Agreeing on a common set of priorities and actions requires negotiating trade-offs, synergies and necessary sacrifices, which is challenging at the local level, particularly when local agencies do not have complete decision-making power over their actions (Giguère and Froy, 2009; Froy and Giguère, 2010b). A lack of flexibility in determining organisational targets means that many institutions, especially public or quasi-public ones, are likely to give priority to their own targets instead of those that are set collectively. An OECD study of the degree of local integration between economic development, skills and employment policies in 11 countries (Froy and Giguère, 2010b) identifies a number of recommendations for better aligning policies.

To design effective strategies relevant to local conditions, it is essential to have a strong evidence base on local labour-market issues. Unfortunately timely data is extremely limited at TL3 levels and below, and local organisations often rely on *ad hoc* surveys. To a large extent, local strategies can be evaluated on whether they focus on "pressing and unique issues" affecting a locality. However, in many cases, local strategies consist of long "wish lists" of potential actions with little connection to local issues and a lack of concrete means for their implementation. This allows local actors to pay lip service to strategic aims while continuing to implement their own policies without regard to others.

Partnerships are becoming increasingly common in OECD countries as a governance tool to link up policies at local level, connect local actors with other governance levels, stimulate initiatives, increase effectiveness and efficiency in the use of resources and enhance policy outcomes. Local partnerships traditionally involve a wide variety of actors from the public, private and not-for-profit sectors, with the exact composition of players depending on the thematic focus. Partnerships have traditionally attempted to work within the existing policy framework, tailoring programmes to local needs. However, more and more partnerships across the OECD now seek to influence the development of policy itself. Furthermore, recent research has confirmed that partnerships can play a central role in facilitating and accelerating the adjustment of local economies to new areas of growth (OECD, 2010c).

If they are to affect local governance, partnerships need to be accompanied by mechanisms to increase flexibility in the policy management framework (OECD, 2003, 2005; Giguère and Froy 2009; Froy and Giguère, 2010b). In many OECD countries, policies are highly centralised, with decision-making in the fields of employment and skills often managed by central government. This means that local partnerships and local strategies can be largely meaningless, if participants are not able to influence the implementation of

mainstream programmes and policies. In a study of 11 OECD countries, Froy and Giguère (2010b) found that policy flexibility is the most important factor influencing local policy integration. The achievement of local flexibility does not necessarily mean political decentralisation – indeed flexibility at the local agency level is sometimes higher in centralised systems. Governments just need to give sufficient latitude when allocating responsibility for designing policies and programmes, managing budgets, setting performance targets, deciding on eligibility, and outsourcing services (Box 2.3). Greater flexibility requires that local actors take more responsibility, which may imply a need for capacity building and the creation of new mechanisms of accountability. In particular, horizontal forms of accountability can allow local actors to be mutually responsible for each other's actions (*e.g.* local boards, partnerships and scrutiny panels). Labour-market policy tends to be the most inflexible at the local level. In 2008, the OECD compared local flexibility in the delivery of labour-market policy[4] in 25 countries and ranked countries according to the criteria set out in Box 2.3. The results are found in Figure 2.6.

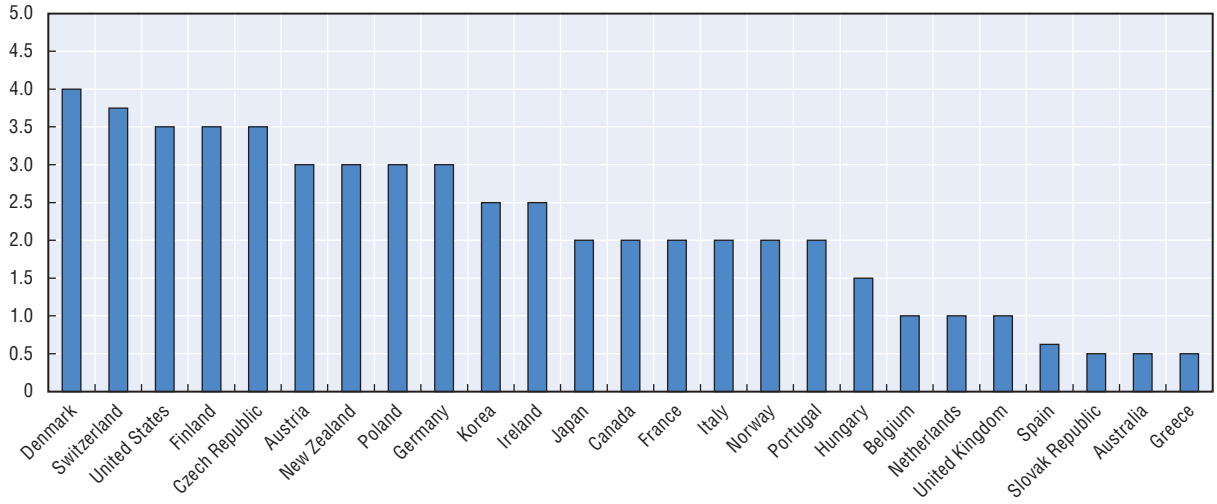
In order for local actors to advance the complex set of policies needed to boost growth at the local level, they need to build the necessary capacities, specifically the analytical and technical capacities to do so, not to mention the human resources. A "chicken and egg" situation appears to exist in relation to capacities at the local level. National governments fear that local capacities are low and are reluctant to offer new responsibility and hence new resources. However, without gaining responsibility and a degree of control over policy implementation, local actors often have little opportunity to build their competences. One way to address the trade-off between flexibility, responsibility and capacity is to award flexibility incrementally. The United States "waiver" system has been successful in

Box 2.3. **The six strands of local policy flexibility**

1. **Programme design and strategic approach:** Do regional and local offices have input into the design of policies and programmes? Are they consulted? Are they free to determine the programme mix and adapt programmes? Can they design local employment strategies?
2. **Budgets and financing:** Are the resources available to regional and local operating units adequate? Do regional and local actors have flexible global budgets or line item budgets for active measures? Are they free to allocate resources flexibly between budget items?
3. **Performance measures and targets:** To what extent are performance measures and targets centrally determined? Do they allow room for regional targets and flexibility in adapting to local circumstances? Are targets and indicators hierarchically imposed or negotiated with regional and local actors? Are sanctions imposed if targets are not met? Are regional and local offices benchmarked against each other?
4. **Client eligibility:** Do regional and local offices choose the target groups that they will work with? Who decides who can be served?
5. **Staffing and outsourcing:** To what extent are regional and local organisational units free to hire, recruit, train and pay personnel and assign them to tasks at their own discretion? Are they free to decide what services to contract out to external providers?
6. **Collaboration and partnerships:** Can regional and local offices decide who they collaborate with locally? Is collaboration recognised or rewarded? Are regional and local offices involved in co-delivery arrangements?

Source: Giguère, S. and F. Froy (eds.) (2009), *Flexible Policy for More and Better Jobs*, Local Economic and Employment Development (LEED), OECD Publishing, *http://dx.doi.org/10.1787/9789264059528-en*.

Figure 2.6. **Flexibility in the management of labour-market policy at sub-regional level in 25 OECD countries, 2007-08**



Note: Estimates of flexibility in the management of labour-market policy draw on the results of an OECD questionnaire to the Employment, Labour and Social Affairs Committee (ELSAC) on Activation of Labour Market Policy in 2007 and further research in 2008. The estimates are based on an analysis of flexibility in the six areas outlined in Box 2.3.

Source: Giguère, S. and F. Froy (eds.) (2009), *Flexible Policy for More and Better Jobs*, Local Economic and Employment Development (LEED), OECD Publishing, *http://dx.doi.org/10.1787/9789264059528-en*.

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granting greater flexibility, for example, to local "workforce investment boards" that are experimenting with new activities and have a proven capacity to deliver. This can help build capacities whilst also promoting innovation and awarding flexibility to those most able to make good use of it (Froy and Giguère, 2010b).

Social capital and trust networks at the local level are also of critical importance. Developing a strong network of informal relationships may be key to helping communities to grow and develop in the longer term. In this respect, formal partnerships between agency heads may not be as important as the many lower-level contacts which they allow to build up between officials who are actually implementing day-to-day policy – as long as these officials have the flexibility to adapt their policies within the framework of a "local problem-solving mentality". Local social networks support the spread of innovation and ideas, increasingly important in the context of the knowledge economy (Coyle, 2001) and those areas with the densest social capital networks are the most successful in today's globalised economy. Social capital can also save money – in an ethos of trust, transaction costs can be reduced in ways that can offset the opportunity costs associated with complex activities.

Regional governments should consider certain issues

Regional governments in OECD countries can do a great deal to facilitate development for sustainable job creation at the local level, through supporting policy flexibility and alignment.

Avoiding a return to "business as usual"

Building the recovery from the "bottom up" will require actions on many different fronts. In particular, local policy makers will need to move from short-term bridging responses to the crisis, to longer term strategies for sustainable employment. Crucial to these strategies will be the development of a stronger and more adaptable skills and labour

pool that will better withstand economic shocks. As the policy agenda moves from job preservation to new job creation, labour-market policy makers will need to collaborate with a broader set of actors – not only employers, but also unions, economic development agencies, colleges and business support providers. Much of this collaboration will need to happen at the level of relatively homogenous local labour markets. It is important that local communities use the current situation as an opportunity to build a better partnership with employers, to better utilise skills and build meaningful career ladders that support progression for the lower-skilled. Communities need to anticipate future skills demands, while ensuring that they build on their own comparative advantages and are adaptable to change. In an environment of tight budgets, public resources need to be used wisely in the delivery of joined-up local approaches that are innovative and effective, minimising duplication and establishing relationships based on trust and mutual accountability.

Breaking out of policy silos

Local actors can benefit significantly from the opportunity to "learn by doing" through horizontal engagement with other policy areas in active problem solving. Both national and regional governments can hinder the "culture of creativity" to address problems at local level. A more sensible approach to risk management locally may be required, with more tolerance for risk-taking in order to produce innovative responses to local challenges. Local employment agencies in many countries remain restricted in the degree to which they can influence the design of policies, move funding between budget lines, negotiate performance objectives and choose local target groups. They could be allocated with more flexibility at the level of local labour markets. Mosley (2009) points out that, at minimum, local actors can be given considerable leeway in shaping their local programme mix and be allowed to allocate a portion of their resources to innovative programmes not foreseen in the national programme portfolio. International evidence also shows that budget flexibility can be conceded to local public employment service actors without posing serious accountability problems, as long as other checks (through "management by objectives" for example) are in place. Setting qualitative outcome targets for local employment agencies, while encouraging reporting on quantitative data is another way to support both flexibility and accountability (OECD, 2011c). It is not only in the field of labour-market policy that local offices can be inflexible. Local management flexibility needs to be awarded within diverse policy management areas (including employment, economic development, transport, social services, and housing) in order to support local job creation and build strong and adaptable labour supply for the future.

At the same time, broad mandates are needed for government agencies locally (Giguère, 2008). Employment agencies need to look beyond helping disadvantaged groups to helping other policy actors create the high-skilled local workforce which will lead to economic growth within the knowledge economy. Vocational training policy needs to keep longer term community level outcomes in mind, and economic development agencies need to include human resources and skills in their regional development strategies. Regional governments can help facilitate this.

Supporting data collection and labour-market intelligence

Good local information and data at local level are essential if policy makers are to tackle both the immediate and longer term issues facing their localities. Co-ordinating labour-market policy with economic development beyond the fulfilment of short-term

business needs requires an understanding of both the local and global conditions and an ability to help firms avoid future bottlenecks, skills gaps and deficiencies, and to improve productivity. Joint and integrating planning requires locally assembled data and expertise which can support the establishment of common strategic objectives and facilitate decisions on policy trade-offs. Regional governments can help by ensuring that data is disaggregated as far as possible to the local level.

Notes

1. As measured by both the Gini coefficients for the relevant variables and the average of the absolute deviations from their respective means.
2. This observation holds true whether the rise in unemployment is measured in percentage points of the unemployment rate or per cent increase in the number of unemployed.
3. The review drew on a number of sources, including a questionnaire to OECD countries conducted by the OECD Secretariat (ELS) and the European Commission in January and May 2009, a questionnaire circulated by the OECD LEED Forum of Partnerships and Local Governance, and Clark (2009).
4. At TL3, implying that the territorial units in question cover populations of 800 000 or less.

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OECD Regional Outlook 2011
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PART I

Chapter 3

Dealing with Sub-National Finances under Strain

This chapter discusses the impact of the crisis on the finances of sub-national governments, a crucial but often under-appreciated aspect of the current fiscal environment. These are major challenges to be addressed by both national and regional policies. At issue are both fiscal sustainability, which may be jeopardised if sub-national financial strains are not addressed, and the strength of the current recovery, which will depend in part on the extent to which increasingly limited public investment resources are managed efficiently and in ways that promote growth.

OECD member countries and regions currently face a narrow path to long-term growth. As stimulus packages are phased out, the priority of many OECD countries is to restore fiscal sustainability. Confronted with the challenge of supporting growth in such a tight fiscal environment, national and sub-national governments face the imperative of "doing better with less". While favourable fiscal conditions allowed some governments to mitigate the consequences of poor governance arrangements before the crisis, in a climate of intense consolidation the reverse is true. Better governance has become a priority and a pre-condition to make better use of scarcer fiscal resources. Sub-national governments (SNGs) have a critical role to play in this respect.

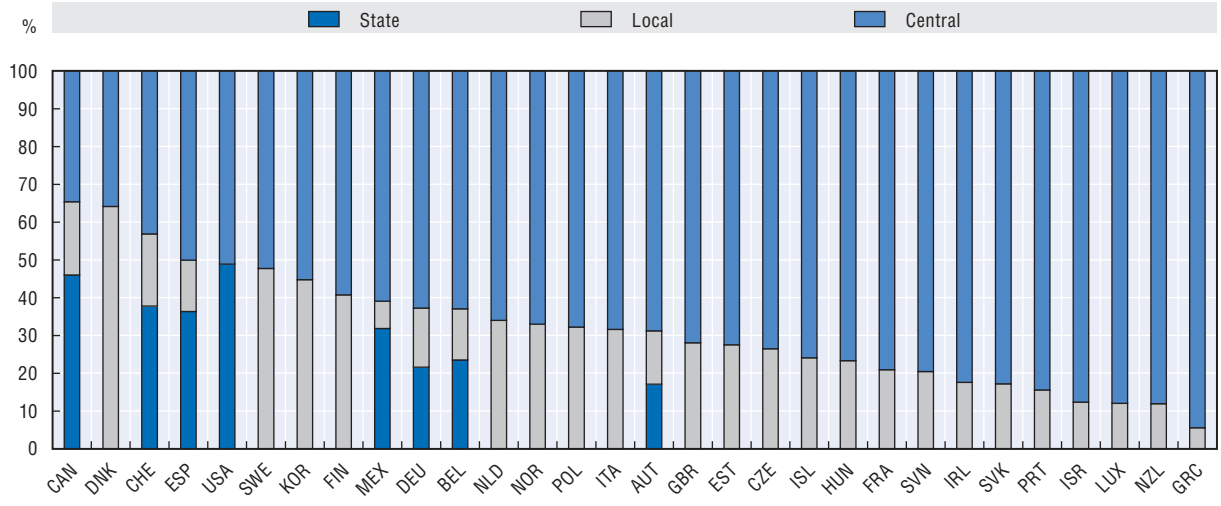
This chapter focuses on the increased financial strains on sub-national governments. It examines the support to SNGs and public investment during the crisis, followed by fiscal consolidation plans which exacerbate pressures on sub-national finances – and regional policy. It then highlights the critical level of sub-national debts in some countries. Finally, it shows that credible involvement of SNGs is critical to achieve fiscal consolidation, and better manage public investment across levels of government.

Increased financial strains on sub-national governments

There's been a trend towards fiscal decentralisation in the last two decades

There has been a broad trend towards fiscal decentralisation in OECD countries in the last two decades. Today, SNGs in OECD countries account for 22% of public revenues on average and 30% of public expenditure (equivalent to 15% of gross domestic product [GDP]), and are responsible for about 64% of public investment (Figures 3.1 and 3.2). Given the

Figure 3.1. **Total expenditure by level of government, 2008**



Source: OECD Fiscal Decentralisation Database, www.oecd.org/document/32/0,3746,en_2649_35929024_47467040_1_1_1_1,00.html.

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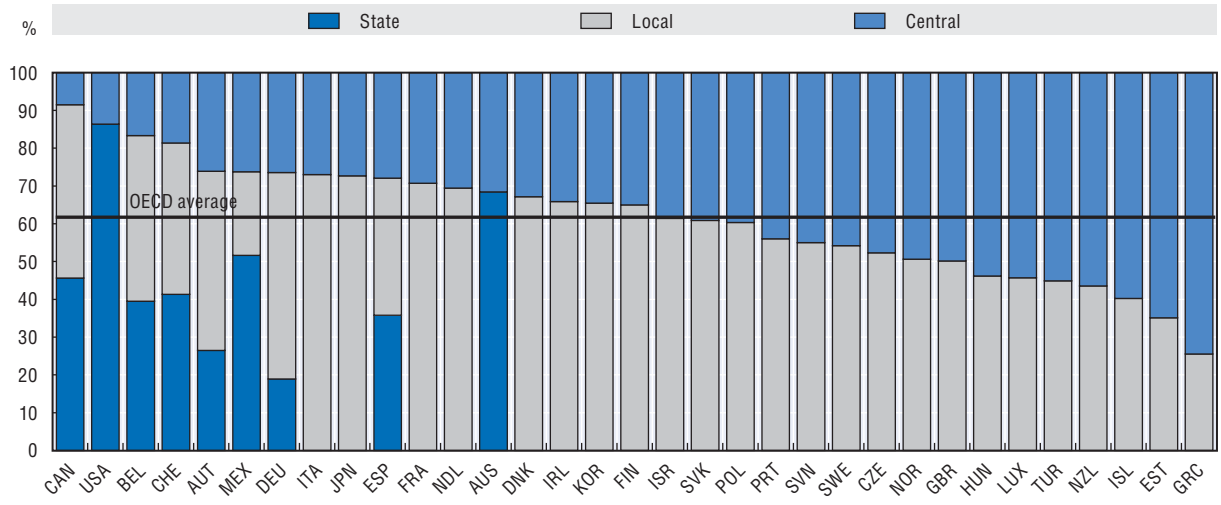
Figure 3.2. **Sub-national governments as a share of total public investment, 2009**



Source: OECD National Accounts Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520536

weight of their revenues and spending in GDP, SNGs' decisions have an important impact on fiscal policy and macroeconomic outcomes. Of course, these averages hide large variations between countries. For example, SNGs' share in public revenues varies from more than 50% in Canada to less than 5% in Greece. Besides, the share of SNGs in public revenue and spending gives very little information about their revenue-raising and spending autonomy. Indeed, on the revenue side, SNGs' autonomy depends on the relative share of "own taxes" in the revenue mix and on their capacity (or lack thereof) to adjust the tax bases and rates. Revenue autonomy shows very large country variations. For example, the share of SNGs taxes vary from more than 12% of GDP in countries such as Sweden, Canada or Denmark, to less than 1% in Ireland, Mexico or Greece (Figure 3.3). On the spending side, the level of SNGs' spending may be limited by fiscal rules and borrowing constraints.

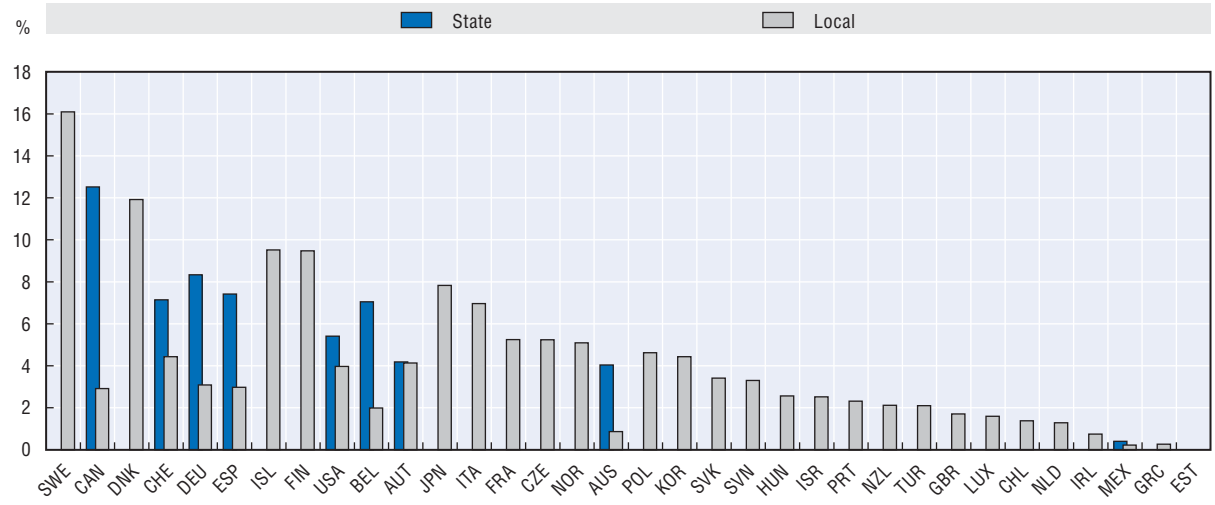
In many OECD countries, SNGs are in charge of delivering crucial public services such as education, health or social protection. For example, they are responsible for almost 60% of education expenditure on average, with a variation from 100% in Belgium, down to 0% in Greece and New Zealand (Figure 3.4) (Pinero Campos and Vammalle, forthcoming).

The crisis has generated a strong "scissors effect" on sub-national budgets

While the impact of the crisis on sub-national finances varied across countries, most SNGs struggled with a "scissors effect" of decreasing tax revenues and rising expenditure (Bloechliger *et al.*, 2010). Tax revenues fell sharply as a consequence of declining economic activity. In some cases, this was compounded by additional tax cuts foreseen in national recovery packages. In countries in which sub-national governments primarily rely on a pro-cyclical tax base, such as corporate or personal income taxes, the decline in revenues was particularly drastic.

At the same time, the crisis led to higher spending on unemployment, social protection and social welfare more generally. In many OECD countries, sub-national governments are responsible for welfare services and social transfers. As a result, SNG

Figure 3.3. **Sub-national tax revenues in % of GDP, 2009**

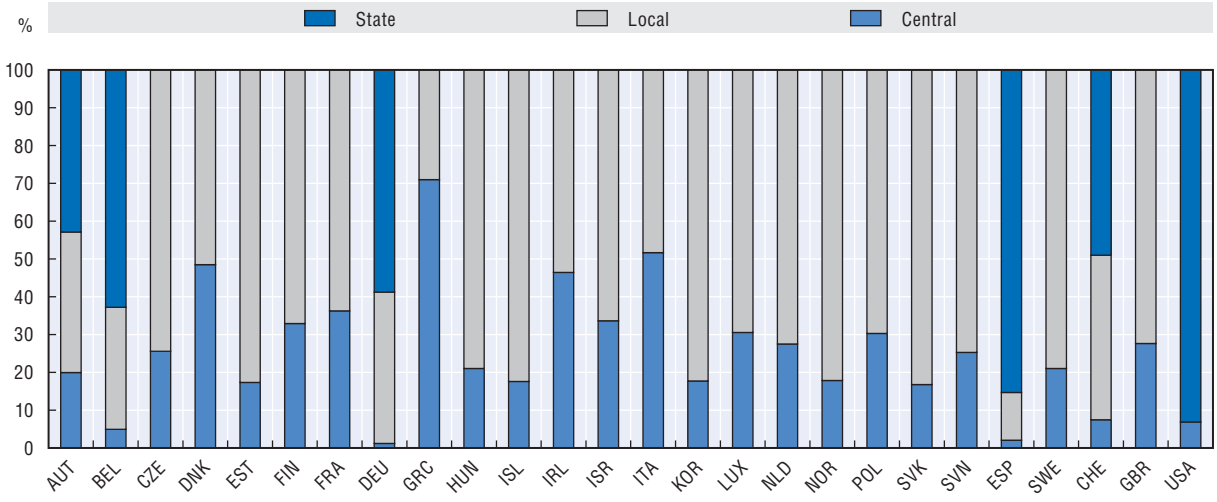


Note: Data for Australia, Greece, Mexico, Poland and Portugal are from 2008.

Source: *OECD Fiscal Decentralisation Database*, *www.oecd.org/document/32/0,3746,en_2649_35929024_47467040_1_1_1_1,00.html.*

StatLink http://dx.doi.org/10.1787/888932520555

Figure 3.4. **Education expenditure by level of government, 2008**



Note: Data are non-consolidated.

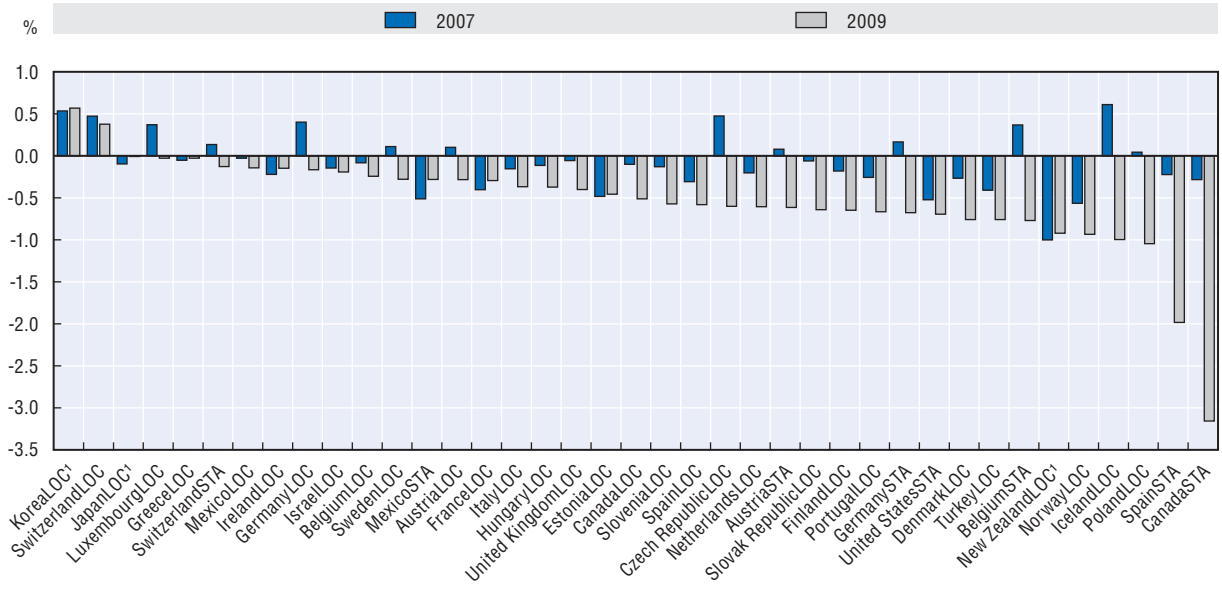
Source: *OECD Fiscal Decentralisation Database*, *www.oecd.org/document/32/0,3746,en_2649_35929024_47467040_1_1_1_1,00.html.*

StatLink http://dx.doi.org/10.1787/888932520574

budget deficits have risen in countries where these are allowed (Figure 3.5), while spending cuts or tax increases have been required in countries where SNGs must follow balanced-budget rules (*e.g.* the United States).

As SNGs' revenues are often based on the previous year's activity (*e.g.* shared taxes, equalisation transfers, etc.), most SNGs are expecting the situation to worsen in 2010 and 2011, and even later. In the United States, states foresee the fiscal year 2011 to be the most difficult in modern times, with few improvements expected for 2012. According to the US Center on Budget and Policy Priorities (CBPP), 44 states are projecting budget shortfalls totalling USD 112 billion for fiscal year 2012 (McNichol *et al.*, 2011).

Figure 3.5. **Sub-national government budget balances in OECD countries, 2007 and 2009**



1. Data for 2008 instead of 2009.

Source: OECD National Accounts Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520593

From stimulus to fiscal consolidation at sub-national level[1]

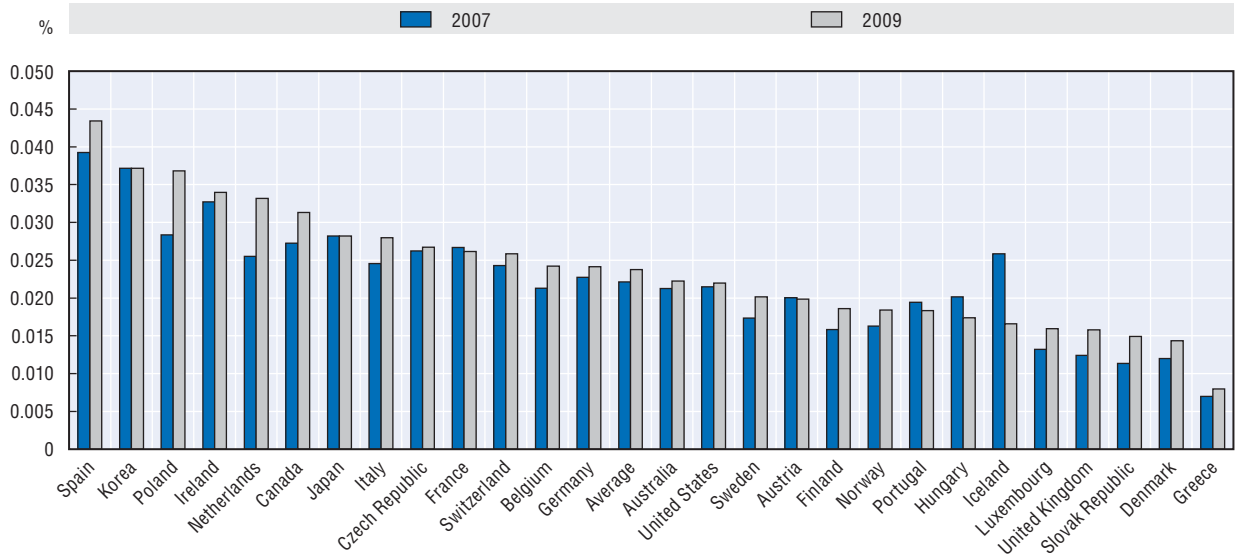
National governments provided support to SNGs and sustained public investment (2008-09)

Support from national governments to sub-national governments was particularly needed as SNGs were severely hit by the crisis. The situation of sub-national governments is important because they may take measures to balance their budgets that work against national counter-cyclical efforts, and their financial difficulties may affect public-service delivery and lead to a decrease in public investment.

During the crisis and the subsequent recession, many OECD countries implemented stimulus packages, which in some cases amounted to 4% or more of GDP (Australia, Canada, Korea, the United States). On the expenditure side, the fiscal programmes typically focused on public investment. Given their large role in public investment in OECD countries as explained above, sub-national governments have played an important role in implementing investment recovery strategies. Some countries have specifically targeted their fiscal recovery packages towards sustaining public investment for SNGs. For example, one-quarter of investment funds have been administered by *Länder* in Germany, one-third of the stimulus package has been managed by states in the United States, half of the investment funding in Australia has been implemented by sub-national actors, and around 75% in Korea and Spain.

These measures contributed to preventing a massive drop in investment at the sub-national level in 2009. In Canada, Italy, Norway, Poland and Spain, there was even a significant increase in sub-national investment in 2009 (Figure 3.6). In France, Germany and the United States, national support essentially prevented a decline in investment that might otherwise have been significant.[2]

Figure 3.6. **Sub-national government capital expenditures as a percentage of GDP, 2007 and 2009**



Source: OECD National Accounts Statistics Database (2010).

StatLink http://dx.doi.org/10.1787/888932520612

Investment strategies launched during the recession had a difficult path to take: they have to be, like other stimulus measures, timely, temporary and targeted. They had to be implemented quickly, correspond to strategic priorities and be transparent and subject to rigorous scrutiny. These dimensions are difficult to reconcile. Overall, the focus has been on spreading resources across the territory rather than targeting for territorial impact.[3] Speed has mainly determined the selection of investment projects. Micro-scale infrastructure projects conducted at the municipal level could easily meet the criteria for eligibility. The emphasis on speed in committing funds, although understandable as a goal, has probably overshadowed planning for maximum economic impact.

The crisis has also made the multi-level governance challenges that are inherent to decentralised political systems more obvious. In particular, four main governance challenges have emerged across levels of government: *i)* the fiscal challenge, or the difficulty of co-financing investment; *ii)* the capacity challenge, linked to inadequate resources, staffing or processes for rapid, efficient and transparent implementation of investment funding; *iii)* the policy challenge, or the difficulty of exploiting synergies across different sectors and policy fields; and *iv)* the administrative challenge, or the fragmentation of investment projects at the local level. These different types of challenges could make the implementation of investment schemes difficult, or could lead to unintended consequences, ultimately potentially undermining the impact of the plans.

The extent to which countries have faced these challenges varies. For example, the fiscal gap has been greater in the United States than in other countries. The administrative gap tends to be higher in countries with a high number of municipalities, such as France or Spain. There are also important variations within countries on the extent to which different challenges were met. This is also linked to the fact that the impact of the crisis has varied significantly across regions, as explained in Chapter 2.

Co-ordination across levels of government and multi-level governance instruments have helped overcome these challenges and target both short-term and long-term development objectives. While some countries were able to mobilise existing co-ordination mechanisms, others had to create them in the midst of the crisis (Box 3.1). For example, the responsiveness of the Australian government during the crisis was helped by the presence of a well-developed multi-level governance body, the Council of Australian Governments (COAG), which provided a forum for decision making and prioritisation of investment. Overall, the effectiveness of recovery strategies based on public investment depends largely on the arrangements between levels of government to design and implement the investment mix. They are critical in particular to bridge the policy and financial gaps across levels of government, enhance complementarities across programmes, facilitate public-private co-operation and foster transparency in the use of funding at all levels.

Box 3.1. **Examples of multi-level governance arrangements mobilised or created during the crisis in 2008-09**

In Sweden, "regional co-ordinators" were created to co-ordinate policies and resources from different levels of government. In the United States, both the federal government and states have created new institutions to co-ordinate the federal, state and agency levels. Horizontal co-ordination across jurisdictions has also been essential to effectively target the relevant scale for investment. In Germany, for example, implementation of the sub-national investment package was entirely decentralised and there were some good practices of inter-municipal co-operation, for example in Nordrhein-Westfalen where an agreement was reached across municipalities for the allocation of funds.

In responding to the crisis, regional policy and related governance instruments have also been valuable for prioritising investment and exploiting complementarities across programmes. In France, for example, regional policy tools such as inter-governmental contractual agreements helped to identify better targets quickly and to channel new central investment funding more effectively. Regional development strategies, defined for the EU Cohesion Policy, have been mobilised in several European countries to speed up decision making for the allocation of investment.

Source: OECD (2011a), *Making the Most of Public Investment in a Tight Fiscal Environment: Multi-level Governance Lessons from the Crisis*, OECD Publishing, *http://dx.doi.org/10.1787/9789264114470-en*.

From stimulus to consolidation: Pressures on sub-national finances have worsened

After two years of implementing fiscal stimulus policies in 2008-09, sustaining public investment and thus helping SNGs to fight the crisis, central governments are now facing significant pressure to consolidate their budgets and reduce their deficits, in order to reassure the markets about the sustainability of their debts. In 2011, gross government debt is expected to exceed 100% of GDP in the OECD area (OECD, 2011a). In many countries, SNGs have contributed to this increase, as will be explained in the following pages. As stimulus packages are phased out in 2010-11, many countries and SNGs are planning some combination of tax increases and spending cuts and beyond, and public investment is particularly targeted as an adjustment variable. A recent OECD survey shows that nearly half of OECD countries plan to scale back public investments in their consolidation plans (OECD, 2011b) (Box 3.2).

Box 3.2. **Fiscal consolidation strategies at the national government level in OECD countries**

Many OECD countries are planning some combination of tax increases and spending cuts in 2011 and beyond, as their stimulus packages expire and budget consolidation begins. Fiscal challenges vary substantially across countries and regions; some face strong market pressures to reduce debt burdens, while others have more room for manoeuvre. Countries in which financial markets have lost confidence have no choice and must undertake fiscal consolidation immediately.

Unsurprisingly, countries with the largest economic imbalances and the most rapid deterioration in public finances require larger fiscal consolidation. For example, Greece and Ireland have introduced very large fiscal consolidation plans measured at around 22% and 17% of GDP, respectively. Portugal, Spain and the United Kingdom have also announced large fiscal consolidation programmes that equal 6-7% of GDP (OECD, 2011a).

A recent OECD analysis of 29 member countries' consolidation plans finds that in 2011-14, most governments will focus at the national level on expenditure cuts rather than revenue enhancement (OECD, 2011b). While almost all OECD countries have deficit targets over the medium term, about half have announced consolidation plans that include measures over the 2010-13 period. For countries with consolidation plans, the size of the plan varies significantly, depending on the country's fiscal position and the current status and timeframe of the consolidation plan. There is significant variation in the composition of consolidation measures. A number of countries have based consolidation mostly on expenditure-based measures. Fiscal consolidation is weighted on average two-thirds towards spending cuts and one-third towards increasing revenues (OECD, 2011a).

The largest expenditure reductions come from reducing programme expenditures, in particular programmes on welfare, health, infrastructure and pensions (OECD, 2011a). Cutting public investment is a priority for budget cuts in many countries, with 13 of the 29 responding countries scaling back public investments in their consolidation plans (OECD, 2011a). In Portugal and Spain, stopping or postponing infrastructure projects by downscaling investment expenditures is one of the most important contributions on the expenditure side (OECD, 2011a).

Source: OECD (2010a), *Economic Policy Reforms 2010: Going for Growth*, OECD Publishing, *http://dx.doi.org/10.1787/growth-2010-en*; and OECD (2011b), *OECD Journal on Budgeting*, Vol. 11/2, OECD Publishing.

In most countries, national consolidation plans impact SNGs, which are often required to participate in the consolidation efforts. This can range from a simple reduction in central government transfers to lower levels of government (France, the United Kingdom), to requiring SNGs to reduce their deficits (Germany, Portugal) or even require SNGs to cut expenditure by given percentages (in Italy, for example, SNGs were required to reduce expenditure by 5% in 2010 and 2011, and by 13% in 2012).

In many countries, SNGs do not have much tax autonomy to increase their revenues, so this pressure on SNGs to reduce deficits may lead them to cut public employment and spending on public services (Table 3.1). The reduction of central government transfers can also generate a cascade effect, where each level of government replicates the reduction in their own transfers to lower levels. This is the case notably in the United States, where states are cutting transfers to local governments, and in Italy, where the regions are also reducing their transfers to provinces and municipalities. Besides an immediate reduction in spending on public services, this continued squeeze on local spending could hamper local, and thus national, recoveries.

Table 3.1. **Reduced central government financial support to sub-national government, 2011-13**

	Main measures adopted at the sub-national level
France	The main transfer to SNGs, the *Dotation Globale de Fonctionnement*, to be frozen at the 2010 level until 2013.
Germany	The federal government adopted a new fiscal rule in March 2009 that will limit the cyclically adjusted budget deficit of the federal government to a maximum of 0.35% of GDP and require balanced cyclically adjusted budgets for the *Länder*. It will become binding for the central government in 2016 and for the *Länder* in 2020. A longer transitional period has been agreed for the *Länder*, since some are experiencing serious consolidation problems. No borrowing limits have been specified for municipalities and social security funds. To comply with the new fiscal rule, the German government has to reduce the structural deficit at the federal level by about 0.3% of GDP each year until 2016.
Greece	The government is planning a freeze pay for all public sector workers, at all levels of government.
Italy	Italy adopted a EUR 25 billion austerity package for 2011-12, with a cut in EUR 8.5 billion in regions' budgets over the next two years.
Korea	Significant spending reductions are planned for the environment (5.3%), general public administration (4.1%) and education (3.6%).
Mexico	The federal revenue sharing (FRS), the main federal revenue available for sub-national entities, decreased by more than 14% in 2009.
Portugal	EUR 100 million reduction in transfer payments from central to local government.
Spain	EUR 1.2 billion cut in local and regional governments. EUR 6 billion cut in public-sector investment.
United Kingdom	The United Kingdom adopted a severe austerity plan, with GBP 780 million (EUR 890 million) cuts in the Department for Communities and Local Government, and a GBP 1.2 billion (EUR 1.37 billion) reduction in local authority grants.
United States	Many state governments are likely to pull back on transfers to municipalities.

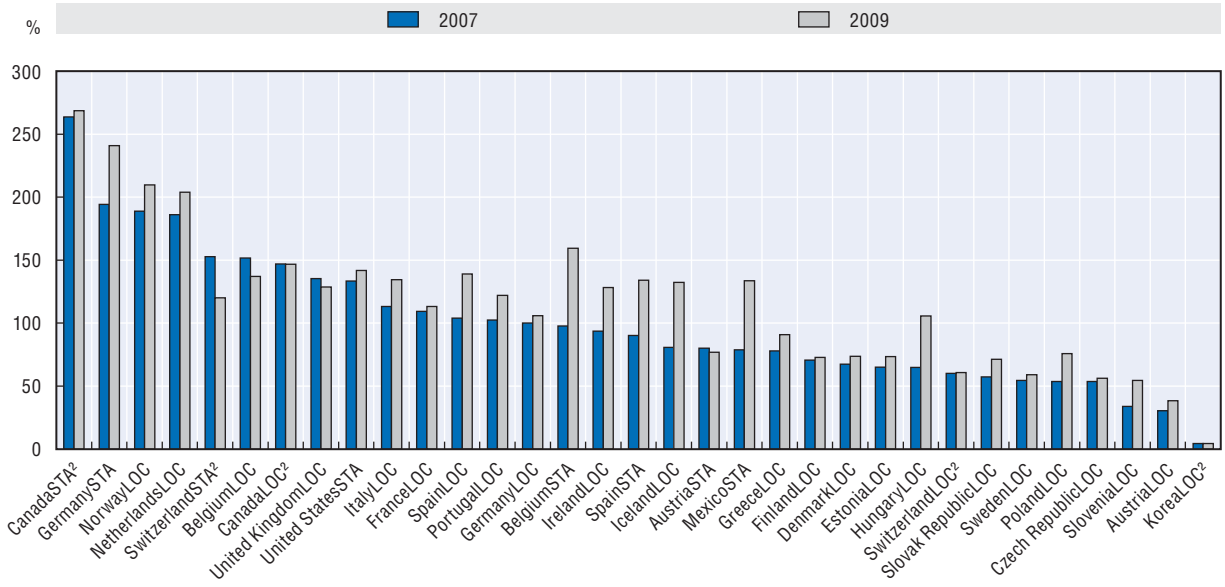
Source: OECD (2011a), *Making the Most of Public Investment in a Tight Fiscal Environment: Multi-level Governance Lessons from the Crisis*, OECD Publishing, *http://dx.doi.org/10.1787/9789264114470-en*.

Can the debt of sub-national governments be sustained?

To avoid cutting public investment or increasing tax levels during the crisis, several countries have relaxed fiscal rules for SNGs to allow them to run higher deficits, thus leading to increased sub-national debt levels. In most OECD countries, there has been a significant increase in the weight of debt in SNGs' budgets (Figure 3.7). SNGs tend to have limited capacity to raise their revenues, given the often limited importance of own taxes in the revenue mix. Also the fact that even in countries where own taxes represent a large share of SNG revenues, these are often constrained, and the capacity of SNGs to change rates and bases tends to be limited (Blöchliger and King, 2006). This therefore raises the question of whether SNGs' debts can be sustained, and where the funds to service their debt will come from: increased transfers from central governments; increased taxes; or cuts in other expenditure, such as capital investment.

SNGs resort more and more to capital markets to fund their needs: bonds currently make up about 70% of western European[4] SNGs' total debt stock (Standard and Poor's, 2010). German states account for about two-thirds of this group's issuance and Germany is the second sub-national bond issuer in the world after the United States (Figure 3.8). This increase in sub-national debt levels has come in a difficult context in financial markets, as the crisis led to the temporary disruption of sub-national credit flows in 2008, notably for bonds perceived as riskier (medium-to-low-rated). In contrast, SNGs with top ratings benefited from a "flight to quality" and could tap international bond markets without much difficulty (except during the last quarter of 2008, in the wake of the Lehman Brothers collapse). As shown in Figure 3.9, the negative impact was disproportionally higher for medium- and low-rated SNGs (A and BBB) than for top-rated SNGs borrowers (AA and AAA).

Figure 3.7. **Sub-national government debt[1] as a share of sub-national government revenues, 2007 and 2009**

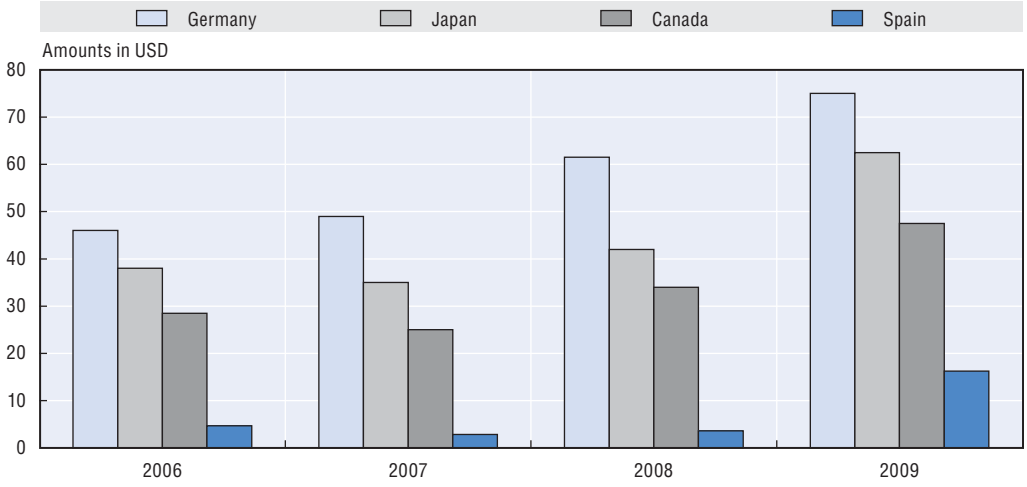


1. Debt corresponds to total liabilities of each level of government, not consolidated, as they are defined in the system of national accounts (SNA). Liabilities include: currency and deposits, securities other than shares, loans, shares and other equity, insurance technical reserves, other accounts, payable. This is a broader criterion than the Maastricht criteria, which do not consider shares and other equity, insurance technical reserves, and other accounts payable. Data are presented non-consolidated as in many cases, an important part of SNG debt is in the hands of higher levels of government, and would therefore disappear after consolidation.
2. Data for 2009 not yet available; numbers correspond to 2008 values.

Source: OECD National Accounts Statistics Database.

StatLink http://dx.doi.org/10.1787/888932520631

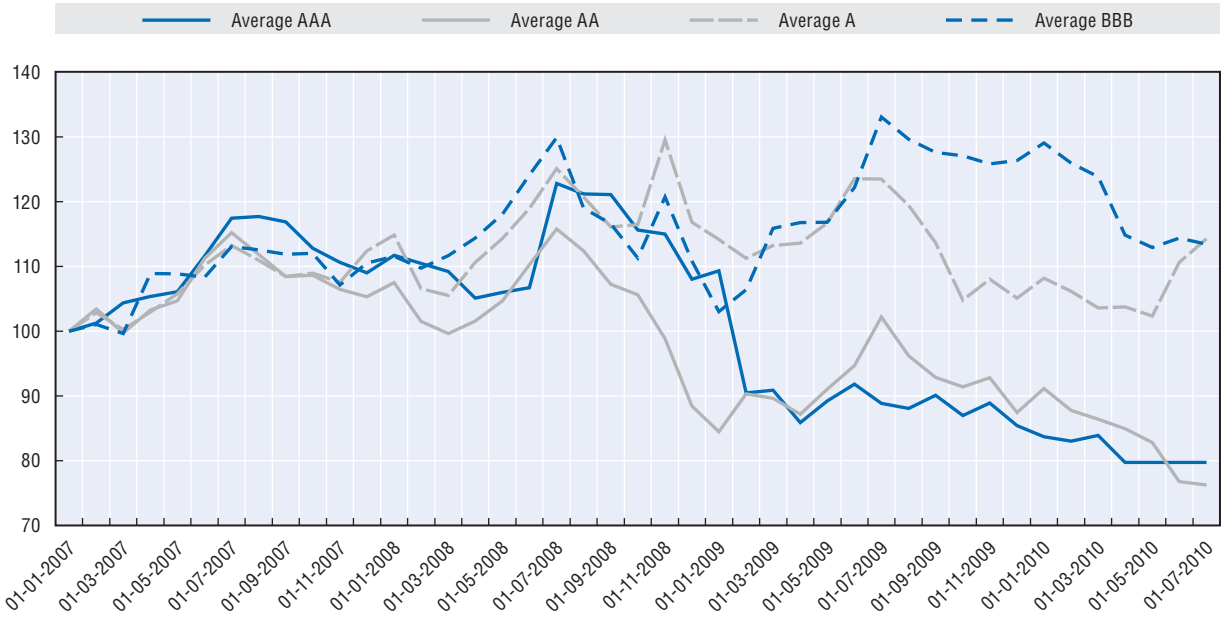
Figure 3.8. **Top four OECD countries in issuing sub-national bonds (excluding the United States), 2006-09**



Source: Calculations based on data from DCM Analogics.

StatLink http://dx.doi.org/10.1787/888932520650

Figure 3.9. **Evolution of prices of top and medium-to-low-rated bonds, 2006-10**



Notes: Index of prices with 31/01/2006 = 100. Specific top bonds are: Alberta 2005 4.43% 01/06/19; Oslo Kommune 2004 4% 06/12/12; Paris 2005 2% 24/11/14; Zurich Kantone 2002 2.75% 14/01/13; Nordrh.-Westf. 2005 3.5% 16/11/15. medium-to-low-rated bonds are: Bucharest (city) 2005 4.125% 22/06/15; Valencia (gene.) 2005 3.25% 06/07/15; Lazio 1998 5.695% 23/06/28; Moscow (city) 2004 6.45% 12/10/11; Prague 2003 4.25% 19/03/13.

Source: Datastream and OECD calculations.

StatLink http://dx.doi.org/10.1787/888932520669

Fiscal consolidation requires the credible involvement of sub-national governments

The financial constraints that SNGs are facing today will have consequences on regional development policy. First, reduced access to financial markets and the need to cut expenditure as part of consolidation plans will affect public investment. Second, when deciding which programmes to cut, the trade-off between the short term and long term may favour the short term and thus threaten long-term investment. Policy co-ordination, transparency and information sharing across levels of government are equally as crucial during the consolidation as during the management of the stimulus. Many announced fiscal consolidation plans will just not be credible without the clear involvement of sub-national governments. In this regard, regional governments, states and municipalities all have a key role to play in "doing more with less". But these actions involve significant challenges.

There are certain challenges linked to fiscal consolidation

As the crisis has increased disparities across regions and differentiated impacts of unemployment, ageing, immigration, financial situation, etc., addressing these challenges calls for differentiated responses, tailor-made to the specific problems and available instruments of each region. In the current uncertain context, SNGs need to ensure access to welfare services to preserve social cohesion and trust at the territorial level, and have a vision for local development strategies. As structural unemployment will continue to be concentrated in certain geographical areas, the demand for social services will intensify

the fiscal challenges faced by sub-national governments. In this respect, the risks associated with inadequate policy settings are rather serious:

- A cascading effect, where each level of government transmits the reduction in their budgets to lower levels of government. This could introduce lags in adjustment processes and disrupt public service delivery. In turn, a largely de-synchronised squeeze on local spending could affect national recovery, as highlighted in Chapter 1.
- The development of a one-size-fits-all fiscal consolidation strategy for all territories, although fiscal and economic challenges vary considerably across regions.
- Across-the-board cuts in capital expenditures at the sub-national level without distinguishing in the degree of priority of programmes.
- A focus on short-term priorities at the local level, despite the fact that strategic priorities, such as education, innovation and green growth, require a regional/local approach.

Given the scale of deficits and the pressure of financial markets, the multi-level governance gaps identified above may be amplified by short-term pressures. It is estimated that 70% of total consolidation efforts will take place in 2011-12 (OECD, 2011b). Not only the fiscal gap, but the also the policy, information and objective gaps run significant risks of worsening, if appropriate co-ordination efforts are not mobilised at all levels of government. The risks are in fact similar to those identified during the management of recovery strategies: prioritising speed rather than a strategic vision, and underestimating implementation challenges in the absence of *ex ante* co-ordination among the different levels of government and other agents involved.

Since budget cuts are by nature more difficult to implement than budget increases, the governance arrangements for fiscal consolidation are intrinsically more difficult and the risk of free-riding strategies is bigger. For example, some regions or SNGs may decide to wait for the others to adjust first. Free riders would incur a lower consolidation cost, but, if widespread, this behaviour may result in the failure of the overall consolidation strategy. This is a classic example of the "war of attrition" model proposed by Alesina and Drazen (1991). Appropriate co-ordination mechanisms could help to reduce these bad incentives and opportunities for free riding, as well as to accelerate adjustment.

The need for speed in budget cuts may entail the risk that multi-level governance (MLG) co-ordination instruments be perceived as increasing transaction costs. Although in some cases the clarification of competencies may be needed, MLG institutions have proven their effectiveness in fostering transparency, dialogue across levels of government, and strategic planning during the management of the recovery process. As building these co-ordination platforms takes time, it would be a loss to diminish their role or not to mobilise them to manage fiscal consolidation.

Regional development policies may be at risk as well. It is clear that some countries are freezing or cutting "explicit" regional development spending, especially in European countries (Table 3.2). Bachtler and Wishlade (2010) report that budgets for regional policy in 2011 had been cut in 8 out of 15 European countries surveyed. In five of the remaining seven, the 2011 budget for regional policy remains roughly stable and in only two countries (the Netherlands and Norway) has the budget for regional policy increased. The largest cuts for 2011 appear to be in the United Kingdom, where regional government offices have been axed and the Department for Communities and Local Government was required to

Table 3.2. **Changes in regional policy budgets, 2010-11**

		Overall trends
Austria	Budget for regional policy division has remained unchanged, but there is considerable local finances pressure.	=
Denmark	A premise in the political process leading to local government reform was that the budget for regional development should remain the same. In 2008, the target was reached and the economic crisis has not affected either applications or project implementation negatively.	=
Finland	No major change in the regional policy budget, but funding related to Structural Funds has increased, as 20% of funding has been brought forward from the future programme years in response to the recession. The municipal co-funding share has been reduced from 20% to 15% at the programme level to reflect the worsening financial situation.	=
France	In response to the budget crisis, all of the major state institutions to face cuts, except the Ministry of Justice and the Ministry of Research and Education. In the case of DATAR, the National Fund for Territorial Development is at risk of reduction.	↓
Germany	In July 2010, the federal government announced spending cuts for the Regional Joint Task budget (GRW) programme, to come into force in 2011 (from EUR 624 million in 2010 to EUR 601 million in 2011).	↓
Greece	Reduction of the 2010 budget for regional policy, as part of the broader fiscal consolidation programme and n + 3 rule introduced for EU funding.	↓
Ireland	As there is no explicit regional policy in Ireland, specific comments on the funding of regional economic development policy must be limited in scope. Nevertheless, the reduction of regionally targeted funding is identifiable as a long-term trend, mainly linked to reductions in regional aid coverage and Structural Funds allocations. Most recently, due to the economic downturn, major funding reviews of policy initiatives have led to substantial cuts in expenditure.	↓
Italy	Important changes were made to the financial allocation of the regional strand of regional policy compared to what had originally been foreseen in the 2007-13 National Strategic Document. This fund has experienced a series of cuts and redeployment of resources toward the anti-crisis measures put in place by the government.	↓
Netherlands	Support for regional programmes has grown massively since 2004. Funding for regional programmes increased in 2011 compared to 2010.	↑
Norway	Regional development policy budgets have been increasing since 2005. Between 2005 and 2010, measures for regional development grew from NOK 1.0 million to NOK 1.5 million, and the narrow regional policy budget rose from NOK 1.4 million to NOK 2.0 million (up 47%).	↑
Poland	EU cohesion funds main funding (EUR 67 billion for 2007-13). The principles underpinning regional development allocations are being reviewed in the current reform process. The assumption is that by the end of 2013, the amounts of funds spent by the EU budget, the national budget and other public entities will be no less than 3% of the national GDP (Annual average of PLZ 34 billion; *i.e.* EUR 8.2 billion).	=/↑
Portugal	EU cohesion funds main funding (EUR 21.5 billion for 2007-13). 45% of ERDF funding allocated by the end of 2009 and n + 3 rule introduced for EU funding.	=/↓
Spain	Expenditure under the Inter-Territorial Compensation Fund has increased significantly over time, rising from around EUR 800 million in 2000 to a peak of 1.3 million in 2009. With the effect of the crisis, the budget was frozen in 2009 and significantly cut in 2010.	↓
Sweden	No major changes to regional policy budgets in recent years (SEK 3.2 billion in 2009; SEK 3.4 billion in 2010, due to an increase in investments in research and development).	=
United Kingdom	Substantial spending cuts in all departments, including for regional policy. Department for Communities and Local Government was asked to save GBP 780 million in 2011.	↓

Source: University of Strathclyde EPRC (dir. Bachtler John) (2010), "Regional Policy Developments in Europe: Country Reviews 2009-10", *EoRPA Paper*, No. 10/2.

save GBP 780 million as part of the GBP 6.2 billion spending cuts for the current year (*BBC News*, 2010). The effectiveness of the European Union Cohesion Policy has been questioned, with some EU members pushing for big cuts in the next programming period 2014-20.

The fact that borrowing is becoming increasingly difficult for some SNGs (see Chapter 1) amplifies the problem. Some European countries already face the challenge of insufficient matching funds to co-finance EU projects (minimum 15%). Since these national funds would ordinarily serve to unlock EU regional funds, it is likely that in some countries the impact on regional policy spending of cuts to national expenditure may be exacerbated.

Place-based policies can promote aggregate growth

In the current constrained environment, regional development policies and multi-level governance instruments are perhaps two of the few remaining levers to promote growth. Indeed, the need to reduce deficits without choking off what in many countries is still a fragile recovery will require targeting projects likely to yield the greatest returns, particularly in terms of generating growth of output and employment. In particular, this requires achieving more complementarities among different types of investments (*e.g.* infrastructure, innovation and human capital; see OECD, 2009b). A one-size-fits-all approach to public investment, which takes little account of regional specificities or information emanating from regional actors, is unlikely to be successful.

However, policy makers do not currently have all the tools in place to use these regional dimensions effectively. New and streamlined co-ordination mechanisms are needed to manage these complementarities and ensure policy coherence. In this context, the United States has focused on policies geared towards generating and supporting economic clusters. In July 2009, the US administration outlined clear principles for a more integrated regional policy and called for reform of redundant federal programmes.

Other OECD countries are reconsidering long-term territorial and fiscal reforms to enhance efficiency of sub-national actors, but the crisis has had diverging effects on these reforms. In some countries, the focus on urgent actions has delayed institutional reforms, which often require extensive negotiations. This was the case of Finland, where the planned reform of the regional grant system was largely scaled down. Other countries, on the contrary, accelerated reforms. For example in Italy, SNGs accepted a greater reliance on own taxes, as the transfers from the centre were being cut due to the consolidation efforts.

Despite this mixed picture, fiscal consolidation is likely to trigger reforms aimed at increasing sub-central efficiency and tightening fiscal discipline (Bloechliger and Vammalle, 2011). In 2009, the German government adopted a new fiscal rule as part of a larger reform of the federal structure that will require the *Länder* to ensure balanced cyclically adjusted budgets. In Italy, the 2010 update of the Domestic Stability Pact sets the burden sharing of regions and local governments. Accounting practices have been defined and the harmonisation of the budget rules between central and sub-national governments is in progress in order to enhance the transparency of public accounts and the accountability of sub-central governments. To increase budget transparency, the Spanish Autonomous Communities have agreed to present accounts quarterly instead of annually. Territorial reforms, aimed at achieving economies of scale in public service delivery and investment, are also high on the agenda of certain countries, such as Finland, France, Greece and Korea.

It is important to make the most of reduced public investment

Since regional investment strategies constitute one of the few levers policy makers can use to enhance growth, countries and regions cannot afford to get their public investment wrong. Learning from the crisis, it is possible to identify a common set of guidelines for multi-level governance of public investment strategies across countries (Box 3.3). These good practices can apply indeed in a context of fiscal stimulus or consolidation, as in both contexts governments need to make the most out of public expenditure, to support growth and restore trust with citizens.

Box 3.3. **Ten broad principles for multi-level governance of public investment**

1. **Combine investments in physical infrastructure with the provision of soft infrastructure,** such as skills and other innovation-related assets, to maximise impact in terms of long-term productivity growth. Infrastructure policy needs to be closely integrated with other sectoral policies such as human capital and innovation as part of a coherent development strategy. Investment funds are likely to work best as part of a multifaceted policy package that makes use of other policy instruments.
2. **Exploit the value added of place-based investment policies.** Investment should be prioritised to address the specific potential and impediments to growth in each region. In addition to national ministries/agencies, regional and local actors have a critical role to play in identifying policy complementarities and trade-offs in investment priorities. Clarify the social or growth objectives of investment projects and for the latter, favour selection of projects through competitive procedures. Such calls for tenders should allow local actors to reveal their specific knowledge and development potential. This is particularly needed in times of tight budget constraints.
3. **Improve co-ordination mechanisms for the design and implementation of investment strategies across levels of government.** The management of the crisis has shown that co-ordination is critical for designing well-informed investment strategies, better targeting them and ensuring policy and fiscal coherence across levels of government. Since the relationship among levels of government is characterised by mutual dependence, countries need to develop co-ordination arrangements to reduce potential gaps or contradictions between policy objectives, fiscal arrangements and regulations across levels of government, which can undermine national strategies for growth. This may imply setting up mechanisms to enhance dialogue across levels of government or specific instruments such as contractual arrangements. Co-ordination takes time, involves a learning curve and has different types of costs (transaction, opportunity, monitoring costs), but when properly designed and implemented, long-term benefits of co-ordination should outweigh its costs.
4. **Enhance horizontal co-ordination across local jurisdictions** (in particular municipalities) to achieve greater critical mass at functional level and increase economies of scale in investment projects. Fragmented or poorly integrated investment may fail to capture the full benefits. This would avoid the proliferation of small-scale projects with low economic returns.
5. **Build a transparent management process** to improve the selection and implementation of investment projects at all levels of government. Prevent waste and corruption in investment projects from the selection process throughout the tendering until the contract management and payment. Maximise transparency at all stages of the procurement cycle, and establish clear accountability and control mechanisms. It is essential for large investment projects that oversight institutions closely monitor the management of public funds to verify that needs are adequately estimated and public funds are used according to the purposes intended.
6. **Address risks associated to long-term investment commitments through robust budget procedures.** Because investment tends to involve frequently irreversible projects, it is crucial to ensure that existing stocks are used efficiently before investing in new capacity and further constraining future expenditures. Fiscal space needs to be preserved for key public expenditure programmes for sustainable development. Assessments of the long-term consequences of investment decisions need to be incorporated into budget systems at all levels of government. A multi-year perspective can allow both to look beyond short-term political cycles and to make adjustments over time. Cost-benefit analysis and strategic environmental analysis should be mobilised to help inform and select investment projects. Operational costs of the maintenance of investment over the long term, which are often under-estimated, should be fully assessed from an early stage in the decision-making process.

Box 3.3. **Ten broad principles for multi-level governance of public investment** *(cont.)*

7. **Diversify sources of financing for infrastructure investment,** by making more and better use of user fees and creating mechanisms for securing long-term financing for infrastructure. Carefully assess the benefits of public-private partnerships (PPPs), as compared to traditional procurement. Consider setting up joint investment pools across public agencies/ministries, to help prioritise investment and overcome any tendency by spending agencies/ministries to consider only a limited set of investment options. Care is needed in the financing of such funds, as they risk becoming pro-cyclical.
8. **Conduct regular reviews of the regulation with potential impact on public investment decisions and strengthen regulatory coherence across different levels of government.** Contradictory regulations across government levels, as well as obsolete and excessive regulations, may impede public investment. Enhance coherence across sectors in regulation targeting cross-cutting outcomes such as green growth, innovation and risk management. Ensure independence of regulators, which helps establish a stable, credible and transparent framework for public investment.
9. **Focus on capacity building at all levels of government.** Investment projects may fail or engender significant waste or corruption in the absence of adequate or sufficient support services and credible leadership. Robust local public employment systems, with transparent recruitment and remuneration rules, are needed. Developing the ability to manage relations with banks and private actors is crucial for the implementation of public investment. Local capacities to design appropriate investment strategies must be sufficiently developed, in particular regions' capacity to diagnose their competitive advantages and challenges.
10. **Bridge information gaps across levels of government.** More work is needed in most countries to better track investment at regional and local levels in terms of spending and overall impact. Pursue the efforts made during the crisis to enhance the use of e-government tools for performance monitoring of investment funding and the access of citizens, private firms and government services to shared databases.

Source: OECD (2011a), *Making the Most of Public Investment in a Tight Fiscal Environment: Multi-level Governance Lessons from the Crisis*, OECD Publishing, *http://dx.doi.org/10.1787/9789264114470-en*.

Changing instruments in fiscal federal relations

The foregoing discussion points to a particular challenge for regional development policies. Higher-level funding authorities (be they national governments or a supra-national entity like the European Commission) must ensure that their funds are used efficiently and effectively[5] when implementation is in the hands of regional or local bodies. EU member states and the European Commission are currently discussing a range of proposals for "conditionality" in connection with the future of Cohesion Policy; the current US administration is engaged in trying to design (and incentivise) new forms of inter-governmental or public-private co-operation in conjunction with place-based initiatives, especially to promote innovation; and many OECD members are wrestling with the need to find more efficient and effective mechanisms for the management of policies involving a substantial inter-governmental dimension.

The current period of fiscal consolidation is likely to lead over time to increased attention to these conditionality mechanisms. Some countries have already taken steps in this direction (see Bachtler and Wishlade, 2010), for example:

- Greece has accompanied an overhaul of local and regional public administration with the requirement that regions and ministries involved in implementing the *National Strategic Reference Framework Operational Programmes* sign operational programme

agreements with the Ministry of Economy, Competitiveness and Shipping. These agreements provide for tougher reporting requirements, failure to comply with which could lead to reallocation of funding.

- Poland's plans to strengthen the current system of regional contracts, turning them from simple co-financing instruments for cohesion policy interventions into broader co-ordination instruments based on legal agreements between the central government and the regions. This will be preceded by a review of the territorial allocation of resources across the government and of the distribution mechanisms used and the instruments employed by SNGs. The new arrangements are to include provision for policy conditionality and competition mechanisms. A performance reserve, currently in place for regional Cohesion Policy Programmes, will be extended to cover other regional spending.
- Both Poland and the Czech Republic continue to develop their evaluation methodologies and to extend their reach; increasingly, EU evaluation methods are being applied outside programmes financed by the Union. (Poland is recognised by the European Commission as one of the benchmarks in terms of evaluation systems, the only new EU member to enjoy this status.) This may actually reduce the administrative burdens involved while strengthening evaluation, since it implies that evaluation procedures will no longer differ according to funding sources.
- While cutting back on regional policy spending across a wide range of programmes, Italy is launching a new unitary monitoring system and it has so far maintained its EUR 3 billion performance reserve for the *Mezzogiorno*, a clear indication of the importance attached to this instrument.

Over time, fiscal consolidation and, in Europe, the reform of cohesion policy, are likely to lead to wider application of these and other conditionality mechanisms. Yuill *et al.* (2010) also draw attention to the use of national co-finance to ensure that national priorities are reflected in regional development projects. While fiscal constraints make it likely that the trend towards using multiple sources of finance for such projects will continue or even accelerate, ensuring a significant element of national government funding in at least the bigger projects is likely to play an important role in aligning regional and national goals.

In a related development, there are also some indications that discretionary earmarked grants are being employed more and more in the last few years, after an extended period in which OECD governments seemed to be moving away from them.[6] Although Blöchliger *et al.* (2007) warn against such grants in most circumstances, the crisis triggered a surge in the use of discretionary earmarked grants (Blöchliger and Vammalle, 2009). In the context of stimulus, they were attractive both for their speed and for the perceived assurance of "additionality" – it was feared that general purpose grants would simply crowd out expenditure by lower-level governments. A great deal of infrastructure finance, which loomed large in many stimulus packages, was both earmarked and subject to matching requirements (Smart and Bird, 2009; Allain-Dupré, 2011). At the same time, the widespread trend towards attaching performance requirements to general purpose grants or broad categorical grants (in the form, *e.g.* of minimum service requirements or other conditions) also appears to be continuing (*e.g.* Slack, 2009; Shah, 2009, 2010; Steffensen, 2010).

While one might expect a reversion to block grants in the context of fiscal consolidation – lower levels of support to subordinate governments have often gone hand in hand with greater freedom in the use of that support – earmarking may be seen as a way to protect growth-enhancing expenditure from broader budget cuts. Since the most growth-enhancing

investments are likely to generate positive spill-overs – benefits that extend beyond the spending jurisdiction – there may be a case for such grants to prevent SNGs from succumbing to the temptation to cut such spending, particularly investment spending, in order to sustain expenditure on consumption and services, where spill-overs are likely to be small or non-existent.[7]

Summary

The financial constraints that SNGs are facing today will have consequences on regional development policy. First, reduced access to financial markets and the need to cut expenditure as part of consolidation plans will affect public investment. Second, when deciding which programmes to cut, the trade-off between the short term and long term may favour the short term and thus threaten long-term investment. As the crisis has increased disparities across regions and differentiated impacts of unemployment, ageing, immigration, financial situation, etc., addressing these challenges calls for differentiated responses, tailor-made to the specific problems and available instruments of each region. In the current uncertain context, SNGs need to ensure access to welfare services to preserve social cohesion at the territorial level, trust and have a vision for local development strategies.

Notes

1. For more detail on the role of SNGs during the recovery, please see OECD (2011a).
2. The impact of stimulus packages is extremely difficult to assess given the many factors involved. In particular, it is extremely difficult to fully disentangle the impact of investment measures from other recovery measures. Analysis conducted by the OECD in 2009 highlights that, other things being equal, spending multipliers are larger than tax multipliers, in both the short term and the long term, and multipliers are larger in the second year after the impact, for both tax relief measures and purchases of goods and services (OECD, 2009a; Padoan, 2009).
3. In a context of nationally launched strategies, priorities have been built vertically along existing sectors and programmes; and there has been little differentiation among territories in terms of allocation of funds. National governments have focused mostly on sectoral priorities for investment, in particular infrastructure (roads, railways, information and communication technology, public transports, schools). Many countries have also sought a balance with "soft" investment, in particular to support R&D and innovation, green technologies, and investment in human capital.
4. Western European countries included in the sample are: Austria, Belgium, Denmark, Finland, Germany, Italy, France, Norway, Spain, Sweden, Switzerland and the United Kingdom.
5. These two dimensions of performance are related but distinct. "Effectiveness" is concerned with performance in respect of the objectives set without regard to cost. Effectiveness reforms may be cost-increasing, neutral or cost-decreasing. "Efficiency" refers to the relationship between cost and outcome: efficiency reforms aim at better outcomes for any given level of expenditure.
6. The "seemed" here is important. It is not clear to what extent they actually were moving away from reliance on earmarked grants: Blöchliger and Vammalle (2010) present evidence to suggest that the move away from earmarked grants was limited even before the crisis, despite 20 years of official rhetoric emphasising that earmarked grants should be avoided as far as possible. See also Lotz (2011).
7. In fact, the evidence suggests that such spill-overs are likely to be modest in most cases; see Blöchliger and Petzold (2009), but in an environment of consolidation, central governments may still wish to use them to protect spending that they believe to be particularly important for growth.

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PART II

Special Focus: Innovation and Green Growth in Regions

PART II

Chapter 4

Regions Matter for Innovation

Innovation is increasingly seen as the key to increasing or sustaining long-term job creation and economic growth, particularly in economies struggling with heavy debt burdens and the challenge of fiscal consolidation. While economy-wide policies are clearly important, innovation tends to be a highly place-based activity. The present chapter therefore looks at evidence on the role of regions in fostering innovation and at the ways in which regions could better support innovation-driven growth.

Evidence shows the critical role of innovation as a durable source of regional growth. The effects of innovation-related investments are longer lasting than those in physical infrastructure (see Chapter 1). And different forms of innovation investment are needed for regions depending on their growth pattern. Regions with lower-skilled workers are less resilient with respect to the recent crisis in terms of jobs (see Chapter 2). Regional and local budgets are being squeezed, where pressures to meet short-term needs may result in insufficient investments for sources of long-term growth (education, research, etc.) (see Chapter 3). It is therefore critical that regions support national growth efforts through innovation, and the regional diversity of innovation systems implies a place-based element to such support (Box 4.1). To tackle these issues, two questions need to be addressed:

- How should national innovation policies take into account this regional dimension?
- How can regions support innovation that is relevant for their regional development goals?

Box 4.1. **Global trends in innovation and implications for regional and national policy co-ordination**

- Global trends in innovation are changing the nature of regional sources of competitive advantage, but given that the landscape of technology-based innovation is not flat and there is a diversity of regional profiles within and across countries, some elements of a place-based approach are essential.
- Increasing collaboration within regions and across regions in clusters and global networks is one of these trends, with networks changing over time as technologies mature, with some regions maintaining leadership and others gaining or losing at an international scale.
- Trends in national innovation policies as well as regional development policies are placing a greater role on regions given the collaborative nature of innovation-related processes as well as expectations for higher economic and social returns.
- Regions therefore have strategic choices (building on current advantages, transforming, or catching up), and the smart policy mix of instruments across different policy areas depends on the region's competences and type of innovation system.
- As national and regional, as well as local and supranational, governments are all promoting different innovation policy instruments, better ways to work together, and with the private sector, are needed to maximise impact.

Regions are competing in a changing and global innovation context

A number of global trends are shaping the innovation environment for regions

The OECD Innovation Strategy has highlighted a number of trends with respect to innovation that determine different roles for regions (see Box 4.2).[1] Globalisation is reshaping the innovation process world wide, with a dual effect on regions. On the one hand, it increases the need to identify possible sources of growth from within a region, as

Box 4.2. **Trends that frame regional efforts to support innovation**

The term innovation is used to describe many different phenomena, from scientific discoveries to simply "thinking outside of the box" through creativity and design. The OECD identifies four types of innovation in firms: the implementation of a new or significantly improved product (good or service); a new or significantly improved process; a new marketing method; or a new organisational method in business practices, workplace organisation or external relations. Such innovations are technological (product or process), as well as non-technological (marketing and organisational). An innovation may have different degrees of novelty. It does not have to be new to the world; it may be new to a market/sector or simply new to the firm/institution. The OECD is considering extending guidelines for innovation measurement to public sector innovation and innovation for social goals.

The latest data on innovation reveals several trends that frame regional efforts to support innovation:

- **Intangible assets and innovation beyond R&D:** Innovation results from a range of complementary assets beyond research and development (R&D), such as software, human capital and new organisational structures. Investment in these intangible assets is rising and overtaking investment in physical capital (machinery and equipment) in Finland, Sweden and the United States, for example.
- **Mixed modes of innovation:** Firm-level innovation data reveal complementary strategies. Most innovative firms introduce both product and process innovations, as well as marketing or organisational innovations. This is true for firms in both manufacturing and services. There are, of course, differences by sector and firm size. For instance, a larger share of firms in services than in manufacturing introduce only marketing or organisational innovation.
- **Collaboration and networks are essential:** Firms that collaborate on innovation spend more on innovation than those that do not. This suggests that collaboration is likely to be undertaken to extend the scope of a project or to complement firms' competences more than to save on costs. Collaboration is used in innovation processes whether firms perform a lot of R&D, a little R&D or no R&D at all. In this respect, policies that stimulate collaboration and networks will have an impact on the entire spectrum of innovative firms. Collaboration is also observed in the sciences. Production of scientific knowledge is shifting from individuals to groups, from single to multiple institutions, and from national to international arenas.
- **Convergence of scientific fields and multi-disciplinary/interdisciplinary research:** There is evidence that increasingly, innovations are achieved through the convergence of scientific fields and technologies. For example, nanoscience research has arisen from the interaction of physics and chemistry and is interdisciplinary in character. Environmental research is one example of multi-disciplinary research. This requires creating spaces for interaction and cross-fertilisation of different areas of knowledge.

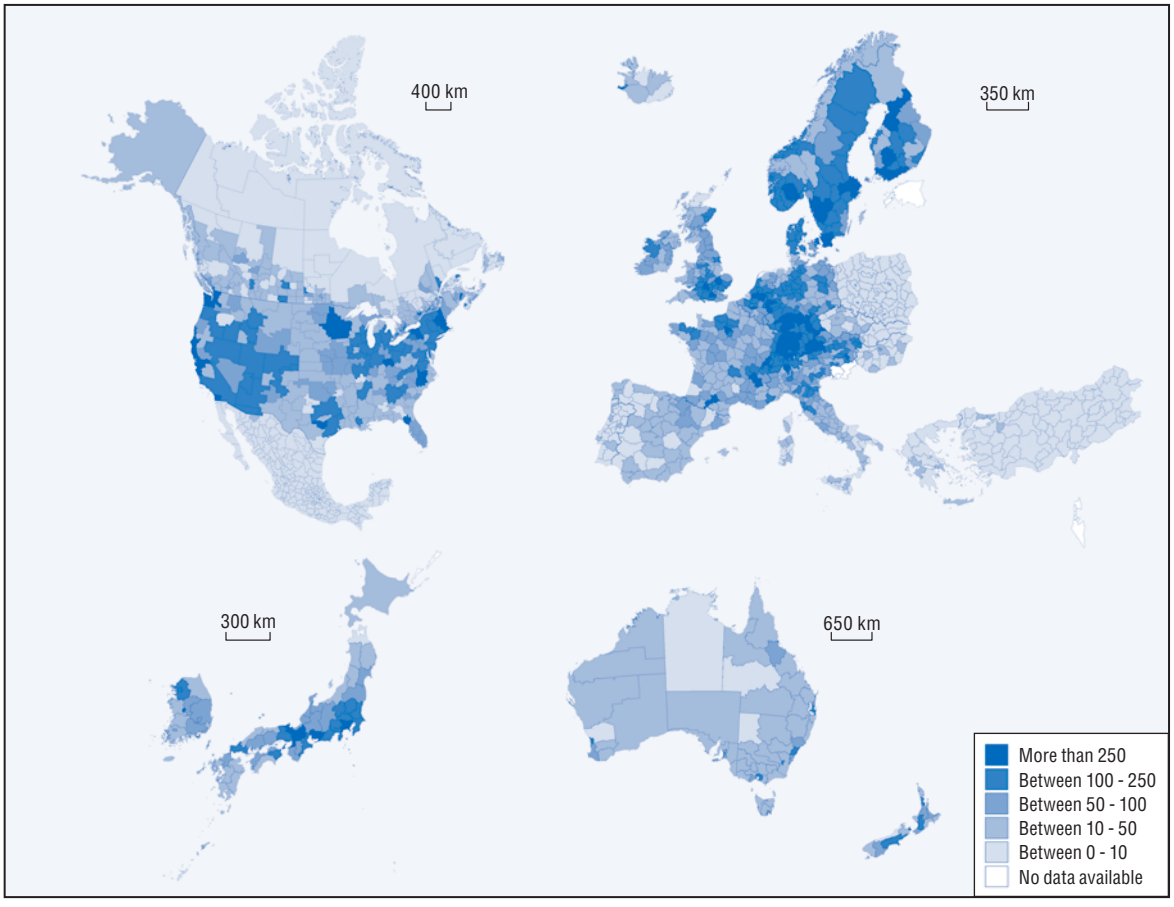
Source: OECD (2010a), "Innovation to Strengthen Growth and Address Global and Social Challenges: Key Findings", *Ministerial Report on the OECD Innovation Strategy*, *www.oecd.org/dataoecd/51/28/45326349.pdf*; OECD/Statistical Office of the European Communities, Luxembourg (2005), *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*, The Measurement of Scientific and Technological Activities, OECD Publishing, 3rd Edition, *http://dx.doi.org/10.1787/9789264013100-en*; and OECD (2010b), *Measuring Innovation: A New Perspective*, OECD Publishing, *http://dx.doi.org/10.1787/9789264059474-en*.

well as retain firms and skilled talent. On the other hand, it creates opportunities for organising research and production across borders, favouring the mobility of talent and increasing the opportunities for international collaboration. Strong knowledge- and technology-intensive regions may benefit from greater opportunities for networking and exchange with their foreign counterparts, so that they can play a leading role globally. In less knowledge-intensive regions and peripheral areas, the knowledge or technological gap can increase if appropriate policies are not put in place. International flows of investment, production resources and talent, may shift the balance of national and regional resources.

The geography of innovation activity is not flat

Different forms of innovation are concentrated in particular OECD regions. There exist hotspots where knowledge and research are generated, as well as regions that have firms effective at transforming existing knowledge into new products and services. The most common measures that reflect technology-based innovation are R&D investment and patenting (Figure 4.1). These activities are most concentrated in the top regions of

Figure 4.1. **Patents per million inhabitants, average 2005-07**



Note: Counts are based on patent applications filed under the Patent Cooperation Treaty (PCT), at international phase, by priority date and inventor's region of residence, using fractional counts. The regional breakdown is provided at Territorial level 3 (TL3). This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map. The map is cropped for ease of display.

Source: *OECD Regional Statistics Database* and *OECD REGPAT Database*.

StatLink http://dx.doi.org/10.1787/888932520688

knowledge-intensive OECD countries. Around 13% of OECD regions account for half of total OECD R&D investment. The share of a country's R&D expenditure carried out by the top region ranges between 80% in Ireland to 21% in Italy. The top 20% OECD regions account for more than 70% of total OECD Patent Cooperation Treaty (PCT) patent applications. Skilled human capital, a critical input for the knowledge economy, is also concentrated in certain regions. Often it is the capital region of a country, by far, with the highest share of workers with tertiary education.

But regional positions shift over time, which vary by technology, especially as technological capabilities spread across more regions. Regional leaders vary by technology. And as technologies mature, the share of patenting by the top 20 regions has diminished. The top 20 regions for telecom patent applications (PCT) accounted for 78% of patents in the period 1977-79, but only 67% in the period 2005-07. Guangdong (China) was not in the top 20 in the late 1970s, but by the mid-2000s was second just after California (the United States). For biotechnology, that share of the top 20 declined from 76% to 52%. And for renewable energies, the change was even more pronounced, from 77% to 42%. Central Denmark was not in the top 20 in the late 1970s, but by the mid-2000s was third.

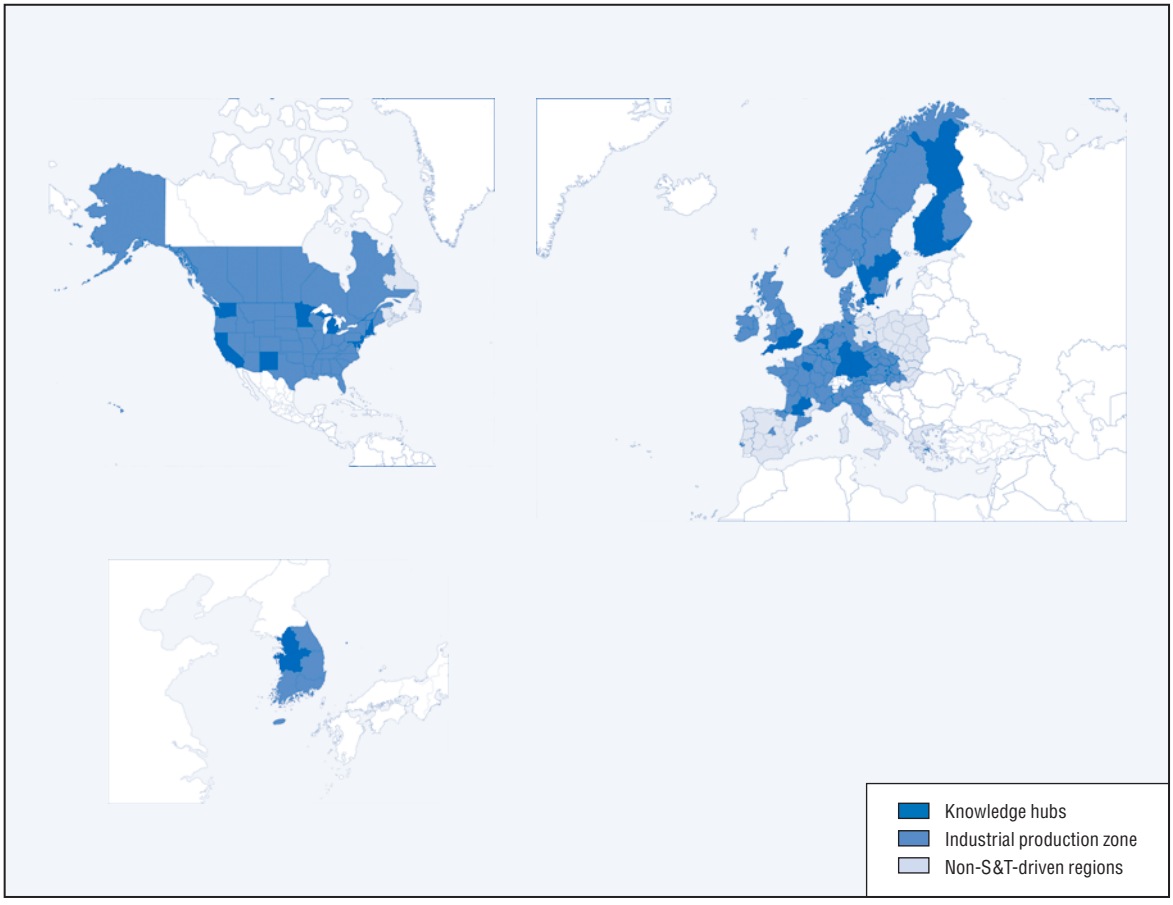
Regions may add value by investing in non-technological innovations, talent and creativity. Regional governments can play a significant role in supporting a creative business and cultural environment that attracts skilled talent, including the "creative class", and favours innovation. Non-technological innovations can boost productivity in firms through improvements to organisational and marketing methods. Such support often includes targeted services for small and medium-sized enterprises and professionals, such as the programmes to support excellence in management in the Basque Country, Spain. Regions with a strong industrial base, such as Baden-Württemberg in Germany, recognise the synergies between the creative sectors and other sectors of the economy in their public innovation support.

Therefore different regional innovation profiles imply different patterns for growth. Multiple types of regional innovation systems co-exist within the same country. An OECD analysis using a series of socio-economic and innovation-related variables identified eight types of regions that are grouped into three categories: knowledge hubs; industrial production zones; and regions that are not driven by science and technology (S&T) (Figure 4.2). While countries with many regions may show a wide diversity of regional types, such as the United States, this is also true for countries with far fewer regions, such as Hungary, Korea or the United Kingdom. This diversity implies two lessons. First, national policies ignoring regional differences may miss some of their targets. Second, regions cannot simply adopt the same solutions as elsewhere and expect the same results.

Collaboration is part of the innovation process

There are very different collaboration strategies by inventors across OECD regions (Figure 4.3). Such differences are due to the size of regions and countries but also the nature of key patenting actors, such as large multi-national firms. Some regions have a relatively low share of co-patents with foreign co-inventors, but a high variety of foreign partners. This is the case for big technology hubs, such as California and Massachusetts in the United States or Bavaria in Germany, where many of their potential collaborators are located nearby, but remain internationally connected (top left quadrant). Some regions, particularly in Asia, adopt a more inward-oriented model, showing a reduced number and share of foreign co-inventors from outside the region (bottom-left quadrant group). Some

Figure 4.2. **Different regional innovation profiles that drive growth**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map. The map is cropped for ease of display. Only regions with available data on the 12 analysis variables were included.

Source: Ajmone Marsan, G. and K. Maguire (2011), "Categorisation of OECD Regions Using Innovation-Related Variables", *OECD Regional Development Working Papers*, No. 2011/03, *http://dx.doi.org/10.1787/5kg8bf42qv7k-en*.

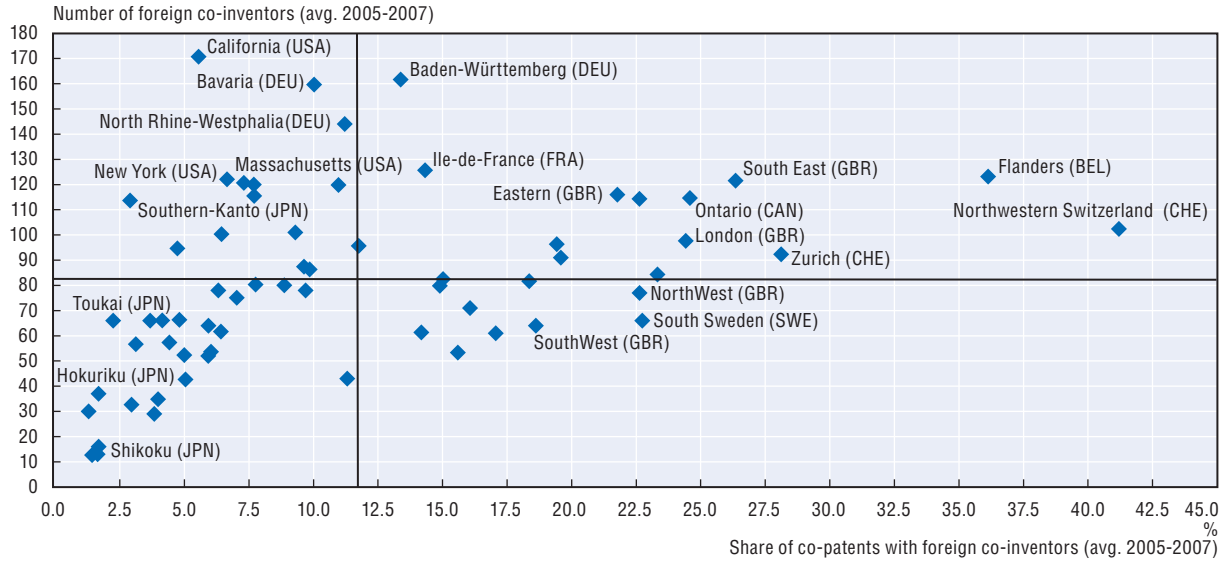
StatLink http://dx.doi.org/10.1787/888932520707

regions have a higher share of their co-invention partners from abroad, but a less diversified number of partners, such as in south Sweden or the northwest region in the United Kingdom (bottom-right quadrant). Finally, some regions are very international in both the share of co-patents as well as the diversity of partners, such as Ontario (Canada) and several European capitals like Île-de-France (includes Paris), London and Zurich. A focus on the telecommunications sector reveals that some regions account for a comparable share of world patenting: Guangdong (China), Southern Kanto (Japan) and California (the United States). California patents, however, are three times more likely to be the result of collaboration and have three times as many regional partners.

Regional roles in networks depend on technology and national setting. The propensity to collaborate varies more by region than by sector. And the structure of networks within countries differs based on the location of key assets like firms and research centres. For example, the country-level networks in large federal countries like Germany and the United States show a multi-hub structure. In some technologies, particular regions play a premier role, such as California and Massachusetts in biotechnology. In other countries,

Figure 4.3. **Variety and intensity in foreign patent collaboration by region, 2005-07**

Top 20% of OECD TL2 regions (by number of total PCT applications)



Source: OECD (2011), *Regions and Innovation Policy*, OECD Reviews of Regional Innovation, OECD Publishing, *http://dx.doi.org/10.1787/9789264097803-en*.

StatLink http://dx.doi.org/10.1787/888932520726

such as France, resources for inventive activity are more geographically concentrated, and the national network of regions has one clear hub region (Île-de-France, *i.e.* Paris) and depending on the technology, possibly a secondary hub like Rhône-Alpes in biotechnology.

Over time, there is a widening of networks and a changing role of regions in those networks. For all technologies, the number of regions active in co-invention networks has quadrupled, from 99 in the period 1977-79 to over 400 in the period 2005-07. The number of regional connections increased over 23 fold.[2] In biotechnology, the number of regions in the global network increased from 62 in the period 1985-87 to 215 by 2005-07. In the 1980s, key regions in Germany, Sweden and the United States played the most prominent role in the global network. In the 1990s, US states took over this central role while by 2005-07, German regions rejoined US states to be at the core of international collaboration. But some regions, even if they are not the top patenting regions, nevertheless have competences that allow them to be well connected to these leading regions. This is the case for biotechnology of several Swedish regions, Oslo (Norway), Capital Region – Copenhagen (Denmark), Helsinki (Finland) or Lombardy (Italy).

Emerging economies are taking advantage of these windows of opportunity. Before 2000, neither China nor India produced patents in "green" technologies in collaboration with regions in other countries.[3] In the last five years, Shanghai (China) and Karnataka (India) have tripled the number of partner regions around the world with which they co-patent in green technologies. Guangdong in China has jumped to be the second largest region for patenting volume in the telecommunications sector. Nevertheless, while Beijing has little patenting volume in the sector, it plays an important "gatekeeper" role for China in terms of integration in the international telecom co-invention network.

International networks both reinforce regional differences and serve in some cases as an opportunity. The leading co-invention network players often preserve their connectivity advantages over time. In fact, they tend to increase the number of international connections at a faster rate than regions with few connections. But there are regions with transformation or catching-up strategies that have proven effective. For example, the region of Catalonia, Spain has been actively supporting its biotechnology sector and its international linkages. The region has moved over the last 30 years from the bottom fourth quintile to the first quintile in terms of number of regional connections within the sector's global network. Evidence shows that a few regions have a large number of international connections, but many more regions are poorly connected. Therefore, increasing the connectivity of the vast majority of lesser connected regions can have a large net impact.

Innovation and regional development policies: A double paradigm shift

A regional development policy approach can focus on competitiveness and innovation

Innovation has been brought to the core of the regional development agenda. In contrast with compensatory policies of the past, regional development policies have evolved into a much broader family of longer term development policies designed to enhance regional competitiveness. They are therefore a tool for contributing to aggregate national innovation and economic performance. The magnitude of innovation-related efforts in regional development policy can be quite substantial. For example, the European Union (EU) Framework Programme for Regional Development 2007-13 foresees a budget of around EUR 86 billion for innovation support, broadly defined.

Regions are called to identify and build on their own development potential and are best able to identify complementarities across policy areas. With the change in regional development policy approaches, regions themselves need to better identify what constitutes their regional advantages. This process may not always be obvious. For example, the Milwaukee area in Wisconsin (the United States) was told by a major consulting firm that there is no "water" cluster in the area. However, regional actors noted strengths in water research in local universities, the importance of efficient water use among its many food and beverage firms, and the presence of considerable fresh water nearby. All of these factors are leading the region to promote its water-related competences and to build connections with other regions globally.

New demands on national innovation policies imply a greater recognition of regions

OECD countries are increasingly incorporating the regional dimension in science, technology and innovation (STI) policies. Several national STI plans mention the importance of innovative places and innovation hubs, such as plans in France and the United Kingdom. Some STI plans note the fact that disparities across regions are a problem for national innovation goals, such as in Hungary and Mexico. Other countries highlight the ways that different levels of government can work more effectively together. One modality is partnership. Countries that have promoted this approach include Denmark and Norway. There are also countries that seek to promote greater coherence and alignment of spending across levels of government, particularly for countries where the regional level has more autonomy to spend its own funds, such as stated in STI plans for Austria and Canada. This increased focus on regional dimensions is supported by an evolving nature in innovation policy approaches that further highlight the role for regions.

Innovation for social well-being and environmental sustainability

Governments are recognising that, beyond economic growth, innovation should serve social goals as a new measure of progress. The concept of green growth (see Chapter 5), for example, highlights that environmental sustainability and economic growth are mutually reinforcing and interdependent strategies, not an either/or policy trade-off. Public funds for innovation and research are increasingly oriented towards finding solutions for social challenges such as environmental sustainability, ageing, or healthcare. In such areas, regional authorities have both the room and the mandate to act. This is observed, for example, in local green public procurement and regulations, as well as innovations in services for the elderly. It also necessitates policy experimentation, such as the Toronto Hydrogen Village in Canada. Furthermore, sub-national governments in the OECD are responsible, on average, for two-thirds of a country's public investment. They have a vital role to play in the greening of that investment and the use of public procurement to spur innovation.

A more systemic approach to innovation policy

Policy makers increasingly recognise that innovation is a systemic phenomenon involving interactions among firms, universities, research centres, specialised service providers, and others. Along with classical market failure arguments, the "systemic failure" rationale is gaining support as a justification for innovation policy. The systems failure approach gives way to a broader range of intervention areas than the traditional instruments of R&D support via subsidies and tax incentives or funding of public research organisations. Given that many systems are more localised than at national level, strengthening those relationships that benefit from geographic proximity can strengthen the regional innovation systems that drive healthy national innovation systems.

Innovation policy accountability

Governments are increasingly called to show the economic and social impacts of their science, technology and innovation investments. As a result of fiscal imperatives and a new approach to the role of innovation policy, the returns to investment are receiving greater scrutiny. There are a number of challenges for determining the impact of such STI investments. There is considerable uncertainty in the innovation process and in the impact of different investments; sometimes a long timeframe is required to measure payoffs. But the impacts of such investments need to be translated into economic growth in a place. The relationships between firms, universities, research centres, and other actors serve to capitalise on these investments to make them more productive. The regional dimension of innovation dynamics as well as the role of regional governments to render more productive these investments, again, calls for this greater recognition of regions in innovation policy.

How can regions support innovation-driven development?

When opening the black box of regional innovation policies, the scope for regional action depends on several interdependent factors simultaneously. They include:

- institutional position, or scope for regions to take policy action given the distribution of STI competences in the country context;
- regional innovation system, including regional strengths and weaknesses for innovative activities and the relationships across firms, universities, and other institutions; and
- strategic choices made by regions to transition their economies to be more knowledge-intensive with higher levels of productivity.

It depends in part on the regional role for innovation policy

The range and nature of competences devolved from central governments to the regions is influential in framing regional innovation policies. Belgium, Canada, Germany, Spain and the United States are among countries where regions have been granted many competences for STI policy. At the other end of the spectrum, regions in small or centralised countries such as Greece, New Zealand and Portugal are not expected to play as significant a role in innovation promotion in their countries. Even in countries with no formal regional devolution of STI policies, regions may still develop regional innovation strategies. In some cases, regional innovation strategy documents have been adopted, but a lack of resources prevents their effective implementation. The differentiation between the degrees of devolution of competences is more blurred in reality than depicted in Table 4.1, but it illustrates the framework for different policy choices.

Table 4.1. **Regional competences in science, technology and innovation policy**

Degree of devolution in STI policy competences and resources		Federal countries	Countries with elected regional authorities	Countries with non-elected regional level/decentralised state agencies
Significant control of STI powers and/or resources by regions		Austria, Australia, Belgium, Brazil, Canada, Germany, Switzerland, the United States	Italy, Spain, the United Kingdom (Scotland, Wales, Northern Ireland)	
Some decentralisation of STI powers and/or resources to regions		Mexico	Denmark (autonomous regions), France, the Netherlands, Norway, Poland, Sweden (pilot regions)	Korea, Sweden (except pilot regions), the United Kingdom (English regions)
No decentralisation of STI powers	Regional innovation strategies		The Czech Republic, Denmark, Portugal (autonomous regions), the Slovak Republic, Turkey	Hungary, Ireland, Portugal (mainland)
	Innovation projects only		Chile, Japan	Greece, Finland, Iceland, Luxembourg, New Zealand, Slovenia

Note: The degree of devolution of competences in innovation-related matters is subject to change. Information reported in this table refers to the first semester of 2010.
Source: OECD (2011), *Regions and Innovation Policy*, OECD Reviews of Regional Innovation, OECD Publishing, *http://dx.doi.org/10.1787/9789264097803-en*.

And those competences at regional level for STI policy may differ within the same country. This can occur by design, such as in the United Kingdom where the devolved administrations (Scotland, Wales and Northern Ireland) have a more autonomous role, including for STI policy, relative to the English regions. Even if regions have similar formal powers, there may be *de facto* differences due to regional size, assets or financial capacity. Survey results show that in many countries, only some regions use particular policy instruments while others do not.

The role of regions in STI policy development and implementation derives from different aspects of STI policy competences. Regions may be active in: *i)* setting the overall strategy and framework; *ii)* developing policy; *iii)* financing policy; *iv)* implementing programmes and instruments; and *v)* assessment/evaluation (of strategies, programmes and instruments). National governments were reported by OECD countries as being more important than regions for most of these factors, with a couple of exceptions in federal countries. Other exceptions are noted with respect to implementing policies, whereby a region may not be ranked as high as a national government on strategy setting and

financing, but may nevertheless play a key role in implementing policy. The relative importance of regions can also be influenced by supranational authorities. This is observed notably in regions of some EU countries that are large recipients of Structural Funds.

There are no harmonised statistics on the relative share of regional spending in total public R&D or STI-related expenditures, but the regional shares are large in some countries. In Belgium, China and Germany, for example, those shares of different aspects of STI spending (typically public expenditure on R&D) can be 50% or greater. In other countries, that share may be less than 10%, such as for Austria, a federal country, or Denmark, a unitary country. As countries do not typically track this share or its evolution systematically (using any country-specific definition, let alone internationally comparable definitions), country responses to an OECD survey give some rough estimates. Reporting countries indicated almost uniformly an increase in the regional share over the last five years, with several countries indicating that this share probably changed by more than 5%.

Regions have strategic choices to boost their innovation-driven growth

The specifics of a regional strategy will depend on a wide range of factors. Certain strategies are more or less relevant for certain types of regional innovation systems. And the policy tools put in place to achieve those goals will depend on the regional scope for STI policy action. At least three strategic approaches are set out in the sections below.

Build innovation capabilities around current advantages

Some regions, at a given moment in time, benefit from key knowledge and technology assets. Such regions, typically dominant in leading technologies, have accumulated capacities and are usually well placed to progress to the next frontier. This is the case for California (the United States), Baden-Württemberg (Germany), the Fukuoka region (Japan), and South Netherlands, among other global knowledge hubs. These regions have a variety of strong firms, private or public research centres, and competence centres acting in public-private partnership mode, all active in creating and exploiting new knowledge. Such regions face the challenge of reinforcing their leadership in particular sectors, and in maintaining their high standard of living. A key question for regions in this position is how to build on current advantages while leaving room for experimentation and diversification into future models. The leading regions of the past are not always those that will lead in the future. Even regions that are not world technology leaders have different potential advantages to build on.

Support socio-economic transformation

After a history of successful and promising development, many regions find themselves needing to readjust to respond to global trends. Many regions that have been industrial production zones are likely to seek this strategy. Such regions may have promoted a strategy to include the technology and knowledge content of manufacturing, like the Nagano province in Japan, Nuevo León in Mexico and Lower Austria. Regions formerly dependent on traditional automotive or naval industries are finding it necessary in the current global economy to reconfigure their regional development strategies. Examples include Piedmont (Italy) and the Detroit area (the United States), both affected by the transformation of the automotive industry, and Bremen (Germany), which was heavily dependent on the naval industry. Another example is the Basque country in Spain, which underwent an initial transformation in the 1980s and is pursuing a new diversification strategy today. Such

regions need first to recognise the relevance of transformation and identify a new frontier. The second step is to identify possible levers for transformation, such as: attracting high-skilled labour; fostering productive use of regional traditions and knowledge; and identifying potential partnerships in national strategies, among many others.

Catching up and creating a regional knowledge base

The most challenging strategies concern regions that lag behind in income per capita, productivity growth and employment generation. A significant number of OECD regions need to formulate a strategy to catch up and to create knowledge-based capabilities. They do not currently operate in a science-and-technology-driven model of growth. Almost all advanced countries include lagging regions that need to raise standards of living and quality of life as well as improve the provision of services. These regions suffer from the absence of high value-added economic activities and a general lack of infrastructure and relevant services. However, there are interesting examples of catching up that have been observed over time. Korea's regions have made rapid progress in the aggregate productivity of manufacturing. In less than 30 years, many of its regions formerly less advanced than those in Latin America have already surpassed those levels to be among the global technology leaders. Other regional competitive advantages beyond resource-intensive science investments may also be used to create knowledge-based capabilities.

Strategic choices require a "smart" mix of policy instruments

The policy mix of instruments should correspond to the objectives of the strategy. The balance between various types of instruments should be adapted to those strategic objectives. The interaction across instruments and different policy fields is also relevant. Synergies between policy instruments need to be encouraged while avoiding policies that conflict with each other's goals. Policy fields may include science and technology but also entrepreneurship and education policies, among others. The challenge is that not all these instruments and policy areas come from one place; they originate in different ministries and levels of government. Therefore, a successful innovation policy mix is not solely determined by the quality of the design and implementation of each component individually, but also the synergies achieved between the different components in a particular place.

Policy instruments may target knowledge generation, diffusion or exploitation, or multiple objectives simultaneously. Knowledge generation includes the specific incentives and regulations for the production of scientific and technological knowledge, including mechanisms to attract talent, and specific incentives for supporting R&D activities in firms. In general, regional action tends to focus on instruments that support knowledge diffusion and take agglomeration effects and proximity into consideration. Many regions are also active in knowledge exploitation, which includes measures directed towards the demand side of innovation, in support of the application of existing knowledge into new products and services. Technological extension services, business development support and human capital development are some of the traditional mechanisms used to encourage innovative business practices.

Accordingly, the new generation of innovation-policy instruments tends to reflect a more systemic approach to innovation. This new approach seeks to minimise boundaries between generation, diffusion and exploitation by offering a mix of support that bundles instruments for all three phases. This approach internalises the potential policy conflict

across different sectoral policies. For example, the new generation of science and technology parks, in addition to their emphasis on knowledge diffusion between different agents, tends to offer complex services intended to encourage both knowledge generation and exploitation. Policy packages to support high-tech start-up firms could combine physical facilities, financial support, mentoring and coaching services, training, services for intellectual property management, access to research facilities, and linkages to technology platforms or networks. The impact of a more systemic approach to the role, missions and profile of regional innovation agencies established in many OECD regions is another sign of this new approach.

There are different tools for effectiveness of public action to leverage private efforts

Instruments are used at multiple levels of government

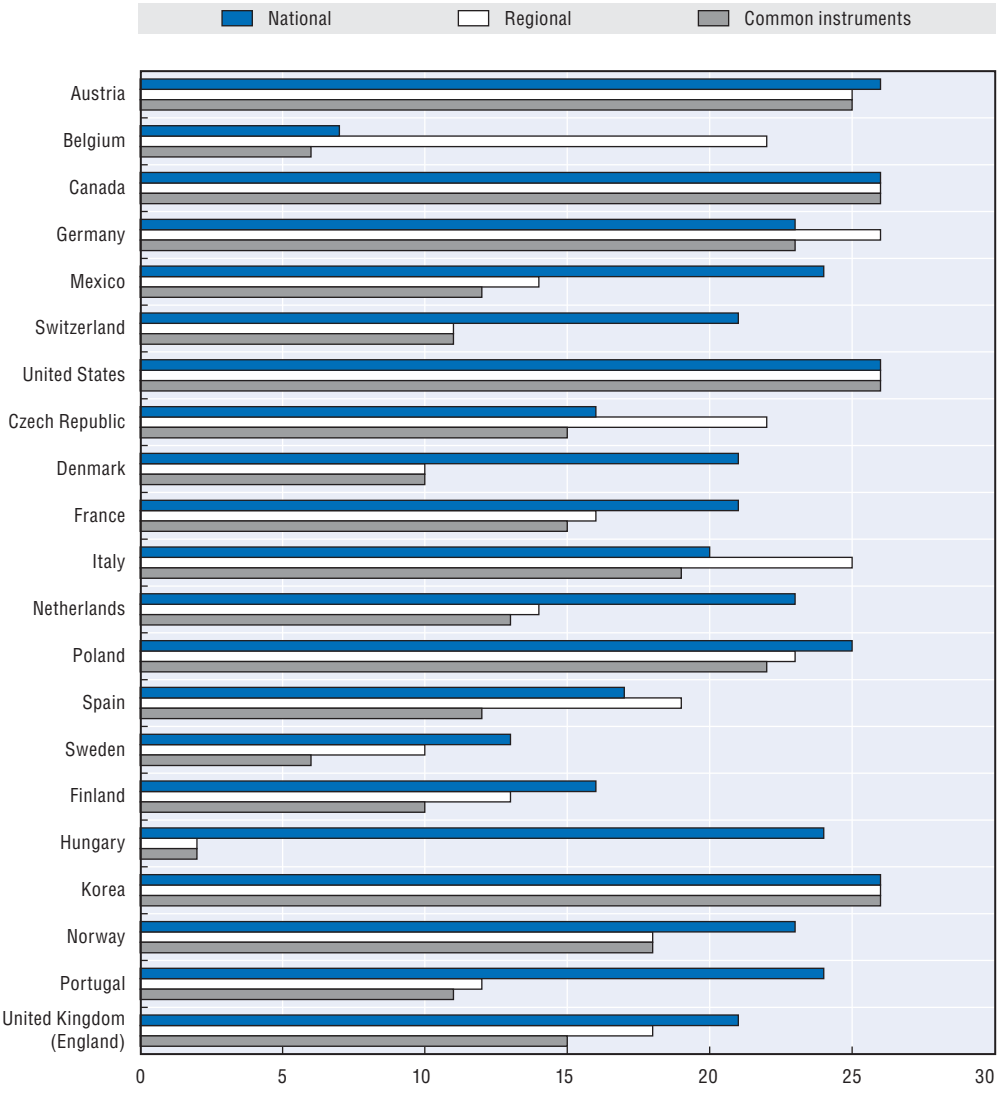
Innovation systems require multiple prerequisite conditions that both national and regional policies influence. National governments are more active than regional governments in certain innovation policy instruments, as reported by member countries in a 2009 OECD survey. Scholarships for postgraduate studies and R&D investment support are areas where national governments are much more active, notably for public subsidies to private R&D (almost twice as common) or tax credits for private R&D (more than three times as frequent). Promotion of scientific co-operation is also more commonly a role of national governments, but nevertheless more than half of the reporting countries also use this instrument at the regional level. Financing via public development banks, public venture capital funds and guarantees are also more common at the national level relative to the regional level.

But certain STI instruments are as common or more so at the regional level. For high-level strategic bodies and technology-foresight exercises, regions are almost as active as national governments. Regions are also financing R&D in public entities, but to a somewhat lesser extent in private entities. Technology transfer activities and innovation advisory services are promoted by regions in most reporting OECD countries. Programmes to support clusters and excellence hubs are frequently used at both levels, but more so at the regional than national level. Incubators and science and technology parks are also more common at the regional (and local) level.

As a consequence, many of the "same" instruments are used by more than one level of government in the same country, as there is not always a strict division of labour. Country structure does not fully determine the number of instruments at the regional level or the share in common with the national level (Figure 4.4). Austria, Canada, Korea and the United States, for example, report that both national and regional governments use not only many instruments, but also the same types of instruments. Countries with a fewer number of instruments at the regional level, such as Denmark or Sweden, nevertheless show that all or almost all of those instruments are also used at the national level. In the case of Belgium, where the national level uses fewer instruments than the regional level, several instruments are in common, such as R&D funding and scholarships.

With sharing of roles across governments, the challenge is ensuring that there is complementarity and not wasteful redundancy. Some redundancy across levels is difficult to avoid and may reinforce system stability. When there appears to be duplication of instruments, it may be for a good reason – such as different target actors or co-financing by different levels of government. For example, at the regional level, innovation-support

Figure 4.4. **Number of science, technology and innovation policy instruments used by national and regional governments, 2009**



Notes: National refers to the number of instruments used at national level, regardless of whether they are used at other levels. Regional refers to instruments reported at regional level, regardless of whether they are used at other levels. Common instruments refer to the number of instruments reported at both national and regional level, which includes those instruments reported in the tally of national and regional instruments.

Source: OECD (2011), *Regions and Innovation Policy*, OECD Reviews of Regional Innovation, OECD Publishing, *http://dx.doi.org/10.1787/9789264097803-en*.

StatLink http://dx.doi.org/10.1787/888932520745

services are often targeted to small and medium-sized enterprises (SMEs) that are not in high-tech sectors, while national-level innovation support services are more often intended for high-tech sectors. Excessive redundancy of instruments can be attributed to: a lack of awareness of the instruments developed at another level of government; a failure to distinguish between target groups; and excessive complexity preventing the intended beneficiaries of the policy instrument (*i.e.* firms, research institutions, etc.) from understanding the public offer of support. Instruments at one level may also be developed to address problems created by policy from another level.

A number of challenges in STI policy result from these multi-level governance arrangements, such as whether a regional asset is of national significance. National policies determine significant STI resource flows to actors in regions. Regions are orienting their strategies, at least in part, towards national and supranational objectives for recognition and accompanying resources. The fact that many regions prioritise the same sectors is in part a response to objectives and funding flows from higher levels of government, even if it is not possible for all regions to be strong in the same sectors. Calls for proposals and other competitions to recognise or give a label to regional strengths are one common tool. For example, France's competitiveness poles programme labelled certain clusters of international significance (and hence a priority for the national government) and national significance (a priority for the region). Other examples include the Networks of Competence (Germany), VINNVÄXT clusters (Sweden), or knowledge clusters/industrial clusters (Japan). Such designations also serve to align resources across levels of government around common objectives.

Regions need to map disparate financing sources behind a coherent strategy. Funding for STI-related activities may come from different levels (local, regional, national and supra-national) as well as different sectoral ministries at the same level (science and research, industry and enterprise, regional development, education). Many regions therefore try to fill the gap when resource flows from other levels are not sufficient. Regions with little independent resources or STI policy competences are more dependent on the different national or supranational programme funds. Regions need to pool together the different programmes and instruments into this multi-level policy mix.

Once the particular multi-level governance problem has been diagnosed, there are different co-ordination mechanisms that can help, and countries use many simultaneously. Such mechanisms include dialogue, consultation, contracts, project co-financing, regional development agencies, and national territorial representatives, among others. Almost all countries report using four or more of these tools. One lesson that emerges most clearly from country feedback is that regular dialogue and consultation are generally considered to be the most effective tools for co-ordination in a multi-level governance context. Dialogue can build relationships as well as promote information sharing. It can shed light on the most relevant regional actors in the private and academic sectors, as well as in the public sector, that can be mobilised for improving not only regional, but national performance.

Bringing private actors to the centre of the policy process

Public investment is designed to leverage private sector investment, in the long term if not the short term. A wide range of civil society actors are relevant given the broader approach to innovation, including scientists, academics, training institutions, and labour groups. Studies have shown that when firms are active in the strategy process, regions are better able to address problems as they arise or to increase the utilisation of policy instruments relevant for innovation. The increasingly networked nature of innovation is another rationale to engage a more diverse group of stakeholders for strategy development. The private sector is generally more aware of the global trends and market conditions that will influence their innovation-related investments. Universities and research centres are more attuned to the areas of promise for basic research breakthroughs. And for application of innovation to other areas of public service, civil society at large can play a lead advisory role.

Different institutional forms are used to solicit this private sector and civil society engagement, but there are barriers and risks to bear in mind. In some cases, regional development agencies or regional innovation agencies are by statute entities with a board of directors that includes public and private actors. The same is true of many regional advisory councils, such as the Science and Industry Councils in UK regions or the Growth Fora in Danish regions. There are often a limited number of tireless regional champions who participate in publicly led committees. However, getting fresh perspectives is often more difficult, as is involving SMEs who have more limited time. Business-driven committees have proven more focused on outcomes, as noted in a US-based study. There is also a lack of public sector capacity in providing the right strategic intelligence to such committees. The risks associated with excessive influence of a particular interest group on regional strategies or policies call for balance in the mix of public and private perspectives represented.

Fostering policy learning through better metrics, evaluation and experimentation

New approaches to innovation and metrics to evaluate innovation policies are required to support strategic policy intelligence. Outcome-oriented evaluations require systemic approaches and not simply use-of-funds type audits. Traditional evaluations in the STI field measure the level of outputs (such as new R&D investments, patents and publications), rather than outcomes. Measuring the impact of a change in behaviour of firms serves to inform policy as to its true impact. A narrow view of innovation is reinforced by this lack of metrics. The OECD Innovation Strategy stresses the need to improve the quality of existing metrics and increase the availability of indicators to measure innovation factors that are either not at present measured or whose strategic importance has been underestimated (especially investments in intangible assets). New data, indicators and models for the regional level are needed, in particular for non-R&D-based innovation.

Finally, regions can be relevant laboratories for policy, but this implies a certain tolerance for failure. The diversity of regional situations and the unpredictability of the innovation process generate the need for a certain degree of pragmatic policy experimentation. This requires adequate internal resources (administrative capacity, human resources, political commitment) and external connections to national and international policy-learning networks. Feasibility studies, demonstration and assessment of the impact of new policies or policy mixes can then be made available for adoption by other regions or by higher levels of government.

Regions can and should be agents of change

While regional development paths depend on the past, there are also opportunities to change course. Innovation generation is neither linear nor predetermined, and is subject to uncertainty. Historical accidents, human genius, and long-term concerted action may all support changing regional development paths. A vision for a region's well-being is best grounded in a keen appreciation of its strengths and weaknesses. Regional governments can therefore recognise these opportunities for change and mobilise people as well as public and private resources towards these new goals.

To avoid many common traps, regions need to think global and avoid unproductive forms of competition. Firm co-operation in innovation and S&T networks, extend well beyond regional or even national borders. Even in the largest OECD regions, it is highly unlikely that innovation drivers, barriers and opportunities can be encompassed within

regional administrative boundaries. The globalisation of economic activity, the need to connect to wider knowledge networks and the internationalisation imperative of companies should be recognised in regional strategy documents. In addition, the benefits from public investment for innovation leak across regional boundaries. However, regional innovation policies mostly deploy their tools in the restricted space of administrative regions, rather than functional regions across administrative borders. Policies are implemented "in" regions rather than "for" regions. The answer is to adapt policies to functional regions, beyond administrative borders.

Notes

1. The OECD Innovation Strategy is an OECD-wide initiative requested by member governments to provide policy guidance on boosting innovation performance. The first set of core reports was presented at the OECD Ministerial Meeting in May 2010 and additional research continues. For further information, see *www.oecd.org/innovation/strategy*.
2. A regional connection in this analysis includes at least one co-patent between two regions on average during the three-year period. Region-to-region connections not meeting this threshold were excluded.
3. "Green" patents for this analysis include waste management, air and water pollution reduction, renewable energies, hybrid/electric car technologies and energy efficiency in lighting and building.

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OECD Regional Outlook 2011
Building Resilient Regions for Stronger Economies

PART II

Chapter 5

Green Growth for Regional Development

This chapter focuses on the regional dimension of the shift towards a greener economy, which is currently a major policy priority for OECD countries. Its principal emphasis is on the potential contribution of cities and urban policies in meeting this challenge, but it also looks at the potential for renewable energy development to drive both cleaner growth and the revival of some rural areas. Finally, it also looks at multi-level governance of water, one of the most important and yet environmentally sensitive goods.

Green growth is increasingly seen as a new source of promoting societal progress and a more integrated model for development. However, the shift towards a greener economy implies a rather diffuse process across all sectors and economic actors. How can these different strategies be co-ordinated without taking into account the local dimensions, in cities and rural regions? This chapter focuses on urban and rural policies, as well as the water governance mechanisms that support such a green growth strategy.

How cities can contribute to a green growth strategy

Over half the world's population lives in cities today, as much as two-thirds is expected to do so by 2050, and within the next decade, there will be nearly 500 cities of more than 1 million people, including several "megacities" with populations exceeding 20 million. Beyond that trend, several arguments are usually cited to justify the fact that cities should be at the heart of the transition to a green economy. They include the following:

- Cities' impact on the environment. The urban form matters: the lower the urban density, the more energy is consumed for electricity and transportation. The environment also impacts on cities, especially on cities located in coastal areas.
- The interactions between the economy and the environment are much more visible at the city scale. Attractiveness is a key factor of city growth performance and can be hampered by a poor environment.
- Because green growth is about synergies between environmental and economic policies, an urban policy package is more likely to deliver green growth than a wide economic approach only.

Cities and the environment: It is a two-way relationship

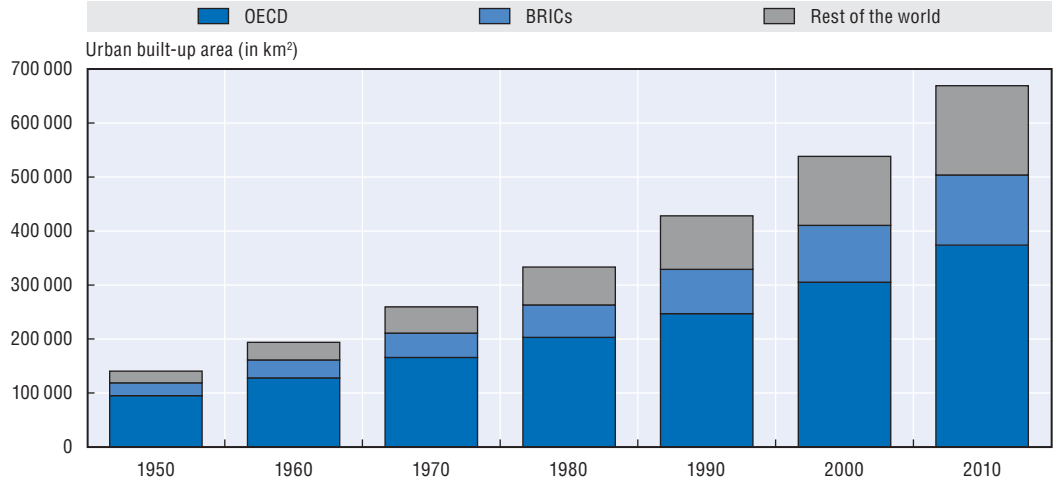
Reducing environmental pressure is perhaps ones of the most critical current policy objectives. Global greenhouse gas (GHG) emissions are projected to grow by a further 37%, and 52% to 2050 (OECD, 2008). This could result in an increase in global temperature over pre-industrial levels in the range of 1.7-2.4° Celsius by 2050, leading to increased heat waves, droughts, storms and floods, and causing severe damage to physical capital, including key infrastructure and crops. The estimated costs of these impacts vary widely, but may be as much as the equivalent of 14.4% of per capita consumption when all market and non-market impacts are taken into account (Stern, 2007).

Urbanisation has had a major impact on the environment. The ecological footprint – the total area required to provide environmental goods and services for a specific region – is particularly severe in cities. For example, London's footprint was found to be 125 times the size of the city and twice the land size of the United Kingdom (Wackernagel, 2006; London Remade, 2007). Although detailed harmonised data are not available at the urban scale, a recent IEA analysis estimates that 67% of global energy use occurred in cities in 2006, and will likely increase to 73% by 2030 given current urbanisation trends. In

climate change terms, cities were believed to generate 71% of global energy-related CO_2 emissions in 2006, and will likely be responsible for 76% of global energy-related CO_2 emissions by 2030 (IEA, 2008).

As discussed in Chapter 1, cities are critical drivers of national and aggregate growth. The contribution to aggregate growth of just the 2% of "hub" regions – mainly composed of the largest OECD urban areas – is approximately one-third. Their large and critical contribution largely reflects agglomeration economies. These benefits, however, are not without limits. Negative externalities including congestion, air and water pollution, and the loss of ecosystems on which the city depends, can, in some cases, reach a point where the metropolitan area becomes less competitive (OECD, 2006). These negative attributes are not internalised by firms and households, and may only show up as direct costs in the long term. They include, for instance: high transportation costs (*i.e.* congested streets) and loss of productivity due to long commuting times; higher health costs; and environmental degradation. Negative externalities are also associated with a city's historical decisions by government officials about how the city should grow. In many OECD countries growth in metropolitan areas has generally taken the form of an expansion of developed areas through suburbanisation. Overall, urban land area in the OECD has doubled in the second half of the last century, and in the vast majority of OECD metropolitan regions, the suburban belt has grown even faster than the core (Figure 5.1) (OECD, 2010).

Figure 5.1. **Incremental increases of urban areas, 1950-2010**



Source: OECD calculations based on data from Goldewijk, K. *et al.* (2010), "Long Term Dynamic Modelling of Global Population and Built-Up Area in a Spatially Explicit Way", *The Holocene*, Vol. 20(4), pp. 565-573.

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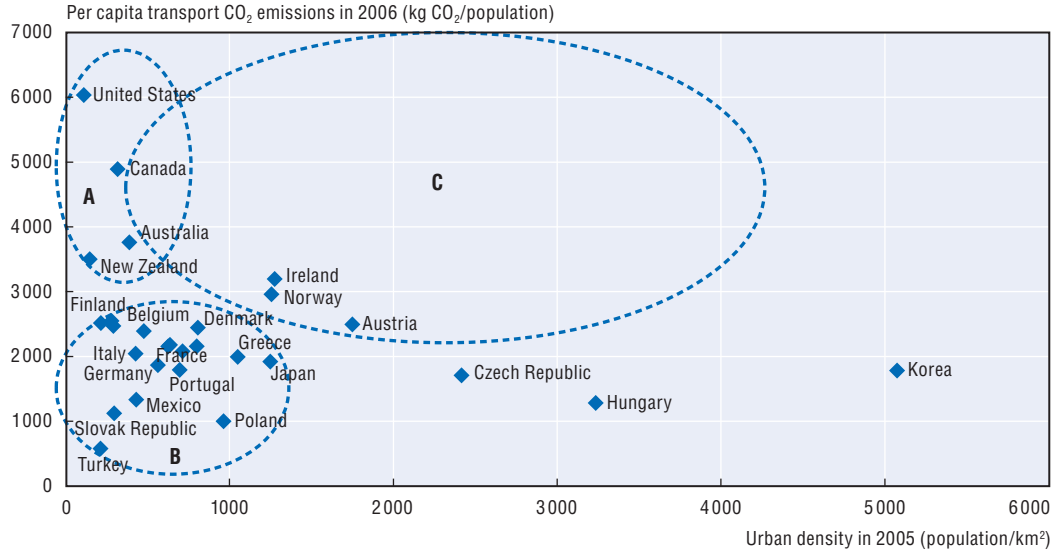
The urban form of cities is indeed one of several critical factors influencing energy demand and GHG emission levels. Figure 5.2 reveals an interesting trend displaying high environment pressure (*e.g.* highest emissions per capita) that can only occur in low densely populated urban areas (A); and not in high densely populated urban areas (C). While there are a number of low densely populated urban areas with low environmental pressure (B), there are no densely populated urban regions with high emissions per capita. This means the probability of high emissions per capita is indeed much higher in low densely populated areas. The urban form of cities is not a necessary condition to attaining lower

Figure 5.2. **CO_2 emissions per capita in transport and density in predominantly urban areas, 2005-06**



Notes: A = Low-density urban areas with high emissions/B = Low-density urban areas with low emissions/ C = Densely populated urban areas with high emissions.
Urban density is calculated based on the OECD definition of "predominantly urban" areas.
Iceland and Luxemburg were not included in the sample as *OECD Regional Statistics Database* identifies no predominantly urban (PU) regions in those countries.

Source: Calculations based on data from *OECD Regional Statistics Database*; International Energy Agency (2008), *CO_2 Emissions from Fuel Combustion 2008*, OECD Publishing, *http://dx.doi.org/10.1787/co2_fuel-2008-en-fr*; and International Energy Agency (2009), *Energy Balances of OECD Countries 2009*, OECD Publishing, *http://dx.doi.org/10.1787/energy_bal_oecd-2009-en-fr*.

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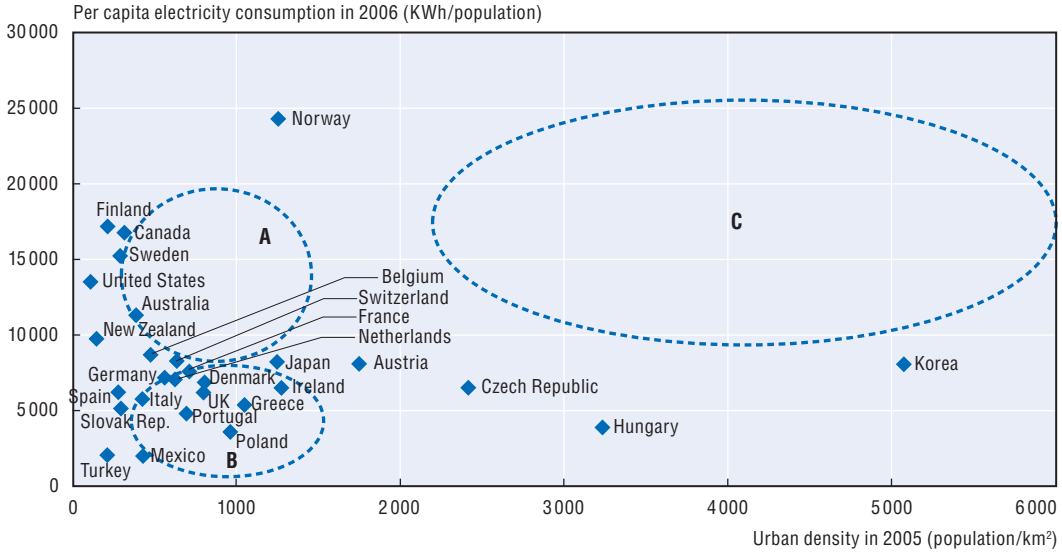
per capita emissions, but a critical factor among several others, such as energy prices, the productive structure of urban areas or the public transportation networks. As urban areas become denser and rely more on public transport, walking and cycling, carbon emissions tend to be reduced. Therefore there are no densely populated urban regions with high per capita emissions.

Similar findings can be drawn in the electricity sector (Figure 5.3). For instance, Japan's urban areas are around five times denser than Canada's, and the consumption of electricity per person in the former is around 40% that of the latter. Denmark's urban areas are denser than Finland's by a factor of four, and people there only consume around 40% of the electricity consumed by the Finns. However, urban areas in Turkey, Mexico and the Slovak Republic have low levels of both urban density and per capita energy consumption.[1]

The contributions cities are collectively making to global climate change may come back to haunt them, undermining public health and the key urban infrastructure systems that are fundamental to their long-term competitiveness. Cities are especially vulnerable to water-related calamities and the effects of climate change. OECD work demonstrates that a 50cm sea-level rise, combined with predicted socio-economic development patterns, could result by 2070 in a tripling of the population at risk of coastal flooding and a tenfold increase in the amount of assets exposed, rising from 5% of global gross domestic product (GDP) in 2008 to 9% of GDP in 2070. Port cities most at risk for coastal flooding are located both in rapidly growing developing countries such as India and China (*e.g.* Kolkata, Shanghai, Guangzhou) and in wealthy countries such as the United States (*e.g.* Miami,

Figure 5.3. **Electricity consumption per capita and density in predominantly urban areas, 2005-06**



Notes: A = Low-density urban areas with high electricity consumption/B = Low-density urban areas with low electricity consumption/C = Densely populated urban areas with high electricity consumption
Urban density is calculated based on the OECD definition of "predominantly urban" areas.
Iceland and Luxemburg were not included in the sample as *OECD Regional Statistics Database* identifies no predominantly urban (PU) regions in those countries.

Source: Calculations based on data from *OECD Regional Statistics Database*; International Energy Agency (2008), CO_2 *Emissions from Fuel Combustion 2008*, OECD Publishing, *http://dx.doi.org/10.1787/co2_fuel-2008-en-fr*; and International Energy Agency (2009), *Energy Balances of OECD Countries 2009*, OECD Publishing, *http://dx.doi.org/10.1787/energy_bal_oecd-2009-en-fr*.

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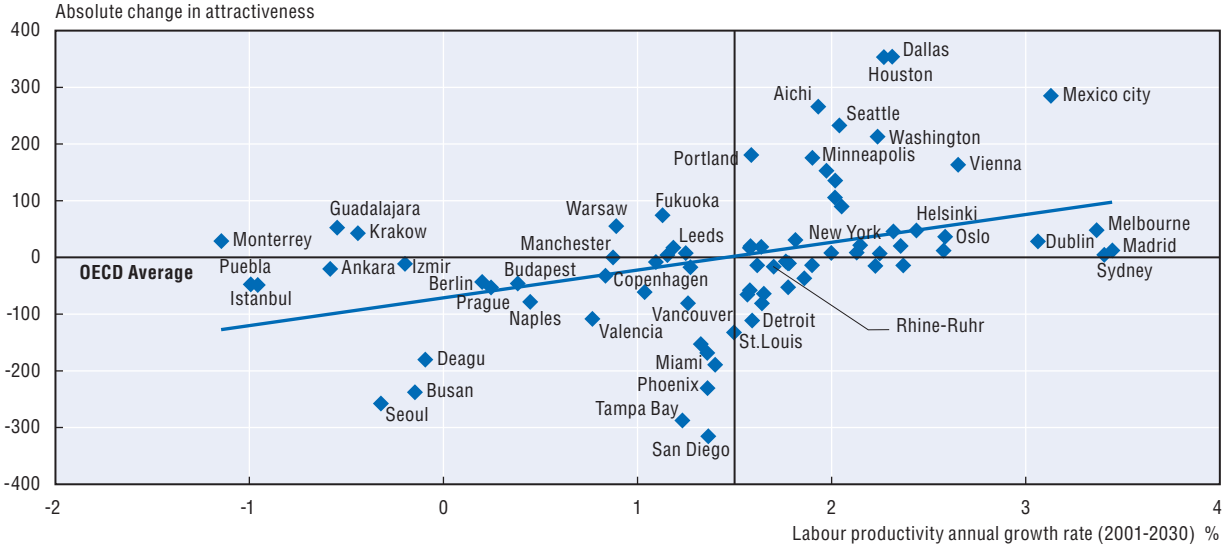
New York City), the Netherlands (*e.g.* Rotterdam, Amsterdam) and Japan (*e.g.* Tokyo, Osaka) (Nicholls *et al.*, 2008). The increasing frequency of severe weather events, combined with sea-level rise, can cause sanitation problems if urban infrastructure is ill-equipped to accommodate a sudden influx of water. Climate change may also intensify competition for water as cities generally rely on their immediate surroundings for water. Finally, climate change is likely to increase both the severity and duration of heat waves, which will be felt more strongly in urban areas, due to the "urban heat island" suspected of warming urban areas 3.5-4.5° C more than surrounding rural areas. Rising temperatures – particularly during the warm weather months – can also impose significant stress on the local energy system, increasing the risk of blackouts, which threaten both the local economy and public health (Hammer *et al.*, 2011a).

Improving environmental quality in cities can strengthen their economic attractiveness

Congestion, pollution and public services constraints affect not just environmental quality but also the efficiency of local economic activities and a city's ability to attract firms and skilled workers. Policies that reduce energy and resource consumption and waste, and increase the attractiveness of the urban environment can thus also support urban economic growth. Findings from a general equilibrium model of OECD metropolitan regions demonstrate that urban density policies and congestion charges can reduce the overall cost to the economy of meeting GHG emissions reduction targets (OECD, 2010).[2]

Using a projection model (IMACLIM), OECD (2010) shows that over the long run improving environmental quality in cities (through curbing local pollution) can strengthen their economic attractiveness. Previous studies define city attractiveness as the appeal for firms of carrying out activities in a particular urban area (Berg and Braun, 1999). This in turn depends on the size of the production the firms may achieve in one location relative to that of others. In the projection model, urban attractiveness is the result of four different factors: expectations over production volume; capital returns; market size; and local environmental conditions. The first three indicators are positively correlated with attractiveness. The modelling exercise shows that the attractiveness of the 78 metropolitan regions included in the OECD metropolitan database is strongly positively correlated to firms' expectations about production and reflected in the average production growth rate (Figure 5.4).

Figure 5.4. **Change in economic attractiveness and growth across OECD metropolitan regions, 2001-30**



Source: OECD (2010), *Cities and Climate Change*, OECD Publishing, *http://dx.doi.org/10.1787/9789264091375-en.*

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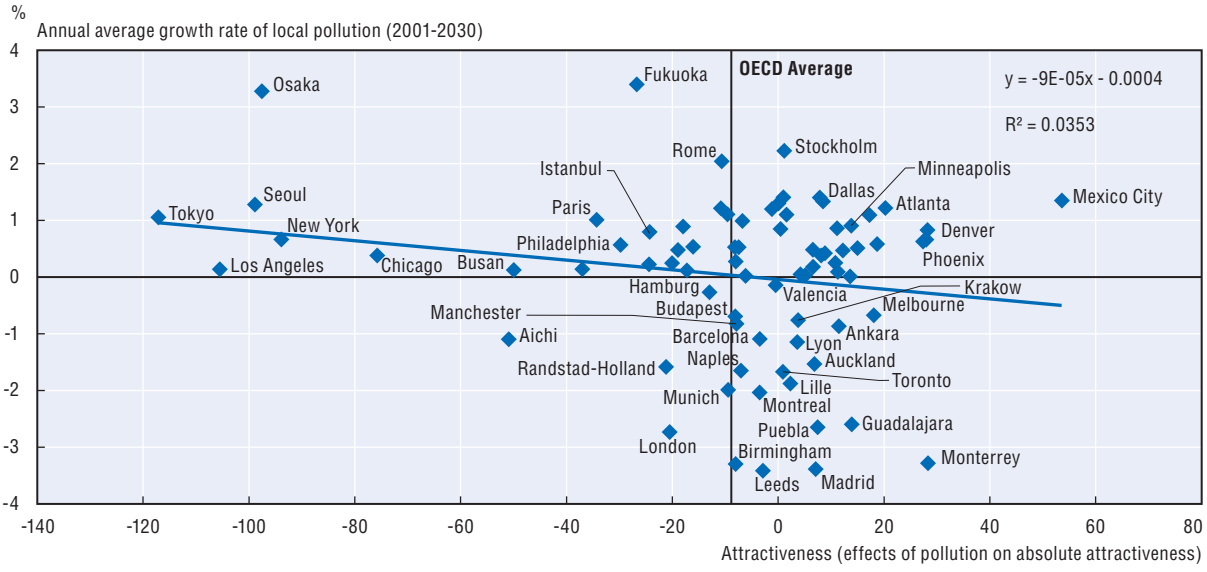
In this model, local pollution also drives attractiveness. Workers are willing to tolerate the negative externalities from pollution if properly compensated by firms in their wages. Higher pollution levels would likely undermine the attractiveness of a metropolitan region. The model is able to show that in the next two decades, pollution emission growth rates will affect the attractiveness of a number of metropolitan regions in the OECD (Figure 5.5). The pollution-attractiveness relationship also provides justification for the implementation of local policies aimed at reducing carbon emissions not only for environmental, but also for economic efficiency reasons.

But how is green growth defined?

The concept of green growth imposes an explicit, normative judgment about the need to steer economic growth in a different direction, addressing externalities and other factors poorly served by current measures of economic activity. It also recognises that environmental policies that do not support economic growth and wealth creation are not

Figure 5.5. **Change in economic attractiveness and pollution emission across OECD metropolitan regions, 2001-30**



Source: OECD (2010), *Cities and Climate Change*, OECD Publishing, *http://dx.doi.org/10.1787/9789264091375-en.*

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sustainable in the long term. In this spirit, the OECD Green Growth Strategy defines the concept as follows:

> "*Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and ecosystem services on which our well-being relies. To do this it must catalyse investment, competition and innovation which will underpin sustained growth and give rise to new economic opportunities*" (OECD, 2011a).

As will be developed in the following paragraphs, the scope of this definition can be extended in three ways when applied to OECD urban areas, by taking into account: *i)* a need for new sources of urban growth; *ii)* policy complementarities present at the local level; and *iii)* the importance of social equity to urban development.

First, OECD analysis shows that the average output growth in predominantly urban areas has been lower than in other types of regions since 1995. According to the United Nations population projections, urbanisation in OECD countries will continue to slow down, requiring policy responses to foster new sources of growth (United Nations, 2007). Given the negative externalities generated by urban agglomeration and cities' urgent need to reduce their energy consumption and greenhouse gas emissions, urban areas have the opportunity to conduct environmental policies that can foster these new sources of economic growth.

Second, there are more opportunities on the local level to enact environmental and economic policies that are complementary, as activities related to environmental protection and economic development are more integrated at the local level than at the national level. Green growth policies benefit from these policy complementarities and can thus be more effective when applied at a local scale.

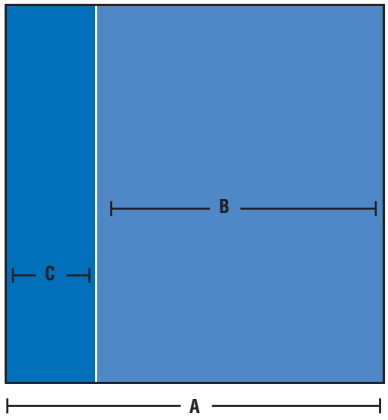
Third, while the OECD Green Growth Strategy focuses on the inter-relatedness of economic and environmental concerns, the implementation of green growth at the local level addresses social issues in a more direct way. There are clear instances where green growth initiatives can provide social co-benefits and others where the transition might generate concerns for social equity.

Alternative green growth scenarios

It is possible to identify six distinct scenarios that embody different economic growth impacts depending on the greening activities, primarily by differentiating between the impacts on green and traditional economies.

The six green growth scenarios are as follows:

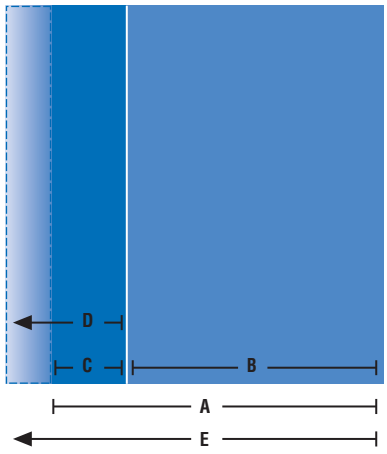
Scenario 1 (Baseline): No impact



Under this baseline scenario, green policies provide no significant long-term economic bump, with the total economy remaining constant (A) and the traditional (B) and green (C) sectors also remaining constant in size. This would occur in two ways: the policies established by the relevant authorities are very ineffective, producing none of the desired environmental or economic impacts, or the policies deliver the desired environmental outcomes but without any demonstrable economic impact. The latter might occur with a tree planting programme designed to improve local air quality, reduce the urban heat island, sequester CO_2 emissions, and improve the overall attractiveness of the city. Because most cities will procure the trees from nurseries or tree farms outside of their area and utilise existing staff to plant and maintain the trees, the economic impacts may be relatively small.

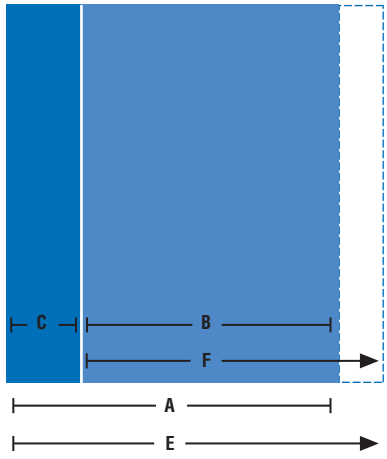
Under Scenario 2, the implementation of green policies and other initiatives designed to deliver local and global environmental benefits results in a significant expansion in the total level of economic activity in the region (from A to E). This expanded economic activity primarily occurs in the green technology and service sector, however, which increases in size from C to D. The balance of the region's traditional economy (B) does not increase in any meaningful way; although there might be some cost savings and other less tangible co-benefits (improved quality of life, etc.) that do occur. In other words, the greening benefits do result in decreased resource use and/or decreased environmental degradation, but the benefits do not have significant spill-over in terms of the traditional economy. This scenario might occur in regions that are importing and deploying large quantities of

Scenario 2: Green sector growth



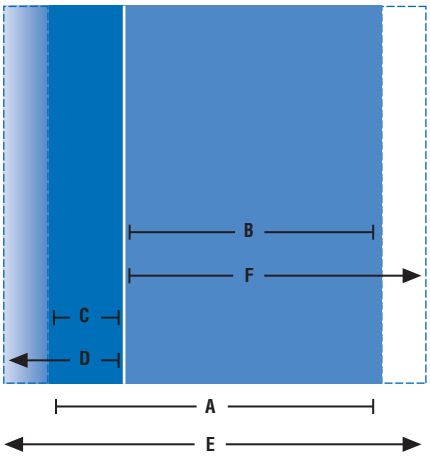
renewable power technology, with the power primarily being exported to other parts of the country. Job growth thus occurs in the renewable sector, but the other localised economic impacts may not be as large as originally hoped.

Scenario 3: Economic greening



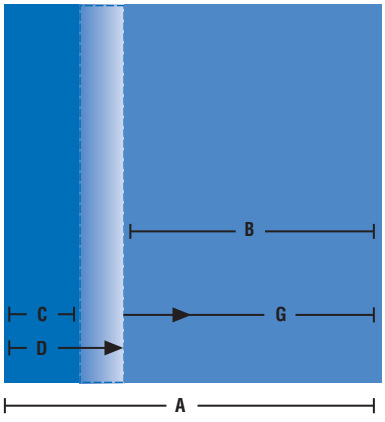
By contrast, economic greening occurs when the implementation of multiple green policies and other initiatives results in a significant expansion in the region's economy (from A to E) that is concentrated in the traditional economy, which increases from B to F. This is not to say that there is no increase in economic activity in the green sector (C), but this activity is either offset by other losses in the environmental business sector (from existing companies in that sector losing market share to new firms), or by the fact that the technology being deployed does not involve significant new employment or is imported from outside of the region. The imposition of congestion pricing in New York City for instance, which was projected to deliver significant efficiency gains in the local retail, banking, and other service sectors, is an example of economic greening. This scenario may also occur in regions with poor air quality, which dampens the overall economic attractiveness of the area. Resolving the problem may involve deploying imported pollution abatement technology at local industrial facilities, remedying the problem without necessarily increasing the size of the local green economy.

Scenario 4: Multi-sector growth



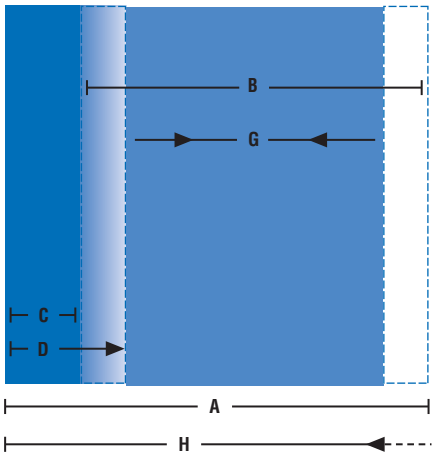
The multi-sector growth scenario would ordinarily be considered the ideal by most policy makers, as greening strategies result in expansion of both the green business sector (from C to D) and the traditional businesses sectors in the region (from B to F). Accordingly, significant economic growth occurs in the region, increasing the overall size of the economy from A to E. Whether the green and non-green segments of economy grow at equal rates is less important than the notion that significant growth occurs in both sectors, resulting in a noteworthy improvement in the level of economic activity in that region.

Scenario 5: Sectoral displacement



One issue of concern to many policy makers is the extent to which growth in one sector may displace or cannibalise economic activity occurring in another sector. In the case of activities designed to improve a region's environmental performance, this could occur if, for example, policies promoting the deployment of renewable energy technology deliberately or inadvertently resulted in the shrinkage of economic activity in other energy sectors, such as the extraction of fossil fuels or operations at fossil fuel-fired power plants. Such a scenario might occur in areas where fossil fuel resources are primarily extracted for local use, or where local fossil fuel-fired power plants are the primary source of power for the region. The Scenario 5 figure embodies this possibility, assuming that growth in the green sector (from C to D) is fully offset by losses in the traditional economy (from B to G), resulting in a situation where overall economic activity for the region remains constant (A).

Scenario 6: Economic stagnation/de-growth

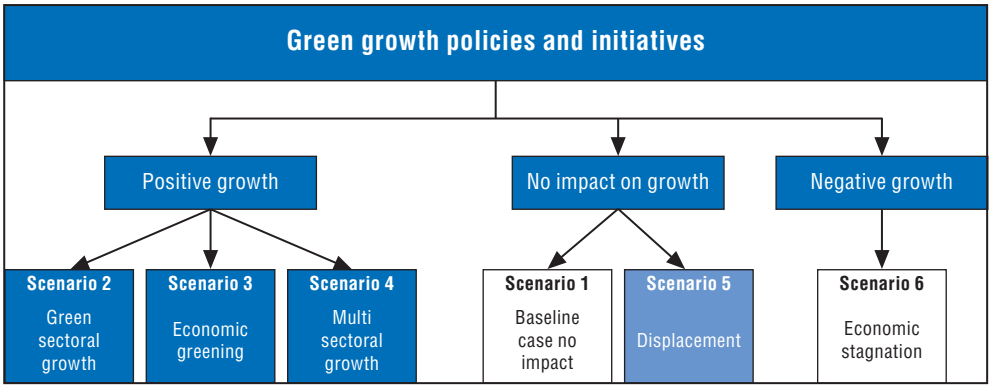


The final scenario, perhaps feared most by policy makers, occurs if the imposition or pursuit of greening policies results in significant adverse economic impacts in the region's economy, stunting activity to such a level that the overall economy actually shrinks (from A to H). This scenario presumes that greening policies do result in some demonstrable increase in the size or level of activity in the green sector (from C to D), but this is more than offset by sizeable losses in the balance of the extant economy (from B to G). Such a situation could occur if greening policies are excessively onerous, significantly affecting the profitability of businesses operating in the region, or forcing businesses to leave or shut down altogether.

Defining green growth in an urban context

Defining green growth in an urban context requires first agreeing on desirable scenarios. Figure 5.6 illustrates how the six above-mentioned scenarios fall along a spectrum, ranging from positive to negative growth outcomes. The (dark blue) colour indicates the desirable scenarios, the (light blue) may be considered second best options, and (white) indicates the non-desirable scenarios. Although it is important to understand the extent to which growth occurs in sectors specifically aimed at promoting environmental protection or resource-conservation services or technology, these sectors generally represent a relatively small subset of the larger service and manufacturing economy in a region. What is important, therefore, is the extent to which green growth initiatives contribute to overall economic expansion in a city region, with that growth attributable either to green sectoral growth (Scenario 2), economic greening (Scenario 3), or multi-sectoral growth (Scenario 4). In all of these cases, the level of economic activity triggered by a greening strategy is sufficient to grow the entire regional economy by some noteworthy amount. Two (1 and 5) envisage no growth occurring or displacement. Although these two scenarios are not optimal, in some cases, they could be desirable. The final scenario (6) displays a situation where environmental policies are sufficiently onerous that they actually result in shrinking the region's economy with business closures and job losses. This scenario is perhaps the greatest fear of policy makers, as it would fulfil the longstanding fear that environmental protection and economic growth are incompatible goals.

Figure 5.6. **Impacts of greening policies on economic growth: The desirable and non-desirable scenarios**



Note: The (dark blue) colour indicates the desirable scenarios, the (light blue) may be considered second best options, and (white) indicates the non-desirable scenarios.

Based on this screening of scenarios, green growth in an urban context could be defined as follows:

> *Urban green growth means fostering economic growth and development through urban activities that reduce negative environmental externalities, the impact on natural resources and the pressure on ecosystem services. The greening of the traditional urban economy and expanding the green urban sector can generate growth (through increased supply and demand), job creation and increased urban attractiveness. These effects are in part the result of stronger interactions at the urban level among economic efficiency, equity and environmental objectives.*

How to enable the transition to urban green growth

Economy-wide policies

Economy-wide policies conducted by national policies are essential to establish broad, cross-sectoral price signals to guide investment in green technologies, for example through a tax on carbon or establishment of national cap-and-trade regulations. More targeted, sector-specific national policies or regulations may also be needed to encourage large-scale investment in energy conservation and fuel switching (Betsill, 2001; OECD, 2008) or create the market conditions for other green technologies to thrive. In both cases, having a clear national policy framework is an important precursor that will determine the appropriateness and direction of different local strategies and policy instrument choice. Additionally, national policies can also help ensure that policy making is not confined to a few front-runner municipalities, but rather is integrated into the functioning of urban areas across the country.

However, economy-wide policies alone are unlikely to deliver green growth. Because green growth is about synergies between environmental and economic policies, policy coherence is necessary and requires taking into account the spatial dimension. City and regional governments may more easily identify and combine complementary green policies within and across sectors than higher levels of government, given the interconnectedness of urban policy sectors. The existence of policy complementarities signals a benefit in the form of the return generated when one policy is enacted along with another (De Macedo and Oliveira Martins, 2006). Identifying the impact and benefits that policy sectors can have on each other is essential to designing policy packages that enhance the effectiveness of each

individual policy. Some urban sectors are particularly interlinked to others, and thus can enhance or undermine the effectiveness of other sectoral policies.

A policy framework for urban green growth

A policy framework for an urban green growth agenda would consider different interactive elements. First, there are policies to support economic growth, including efforts to improve the skills of the local workforce, promote innovation, and improve or expand local infrastructure necessary to sustain growth. These three "pillars" are fundamental prerequisites to a growing economy, and policies aimed at addressing these goals will serve as the first lens through which green growth policies will be viewed. Second, there are greening challenges and opportunities, each of which comes with its own set of tailored technology or policy prescriptions that have been proposed or are in use in cities around the world. We can identify six different types of greening opportunities in a city, including mobility, energy, building, natural resources management (land ecosystem and water), green services and pollution prevention (solid waste, air or water quality). Third, there are different types of policy instruments or tools to promote urban greening (*e.g.* rulemaking authority and regulatory oversight, public spending, financial tools, and information and advocacy). For these three elements, there is an underlying issue of policy competency or jurisdiction. Green growth policies must necessarily involve the efforts of both national and sub-national stakeholders, because no single stakeholder (or tier of government) has sufficient policy influence to implement a comprehensive green growth policy on its own. These different elements interact and come together in an urban green growth policy framework (Hammer *et al.*, 2011b).

Several dynamics are at play here:

1. Sub-national authorities pursuing a green growth programme must necessarily view their policy efforts through an economic lens, meaning pro-growth goals may influence the topics viewed as priorities in a city or region.
2. The greening opportunities or challenges are highly interconnected sets of issues, with actions in one policy area having links to many of the other policy silos. For example, promoting compact city design will have impacts related to air quality, transport system viability, energy-technology decisions, and the like. This concept is discussed at length in the following pages.
3. Finally, these policy decisions all occur amidst an important backdrop, *i.e.* the goals or values that influence policy decisions. These could relate to environmental or economic aspirations policy makers hold for the city/region, or they could relate to social equity goals they also wish to accomplish via a green growth initiative. In some cases, officials may not even realise how their views have been shaped by these factors, as they might represent long-standing operating procedures, technologies, or market practices. Changes might thus be manifested in incremental terms, rather than in paradigm-shattering or generation-skipping technological terms.

How to design an urban policy package for green growth?

To deliver an urban green growth agenda, an urban policy package holds the promise of a new development path where economic growth and higher environmental quality are complementary. The need to exploit synergies among policy instruments demands a dramatic shift toward more integrated policy making at the urban level. More sustained municipal investments in infrastructure that is less carbon-intensive represent a

necessary first step. However, supply-side measures alone will not be enough and are unlikely to be sustainable, given the current price of green technologies and the market demand for low-carbon goods and services. Thus, urban policy makers should pursue an integrated policy package that takes into account: *i)* how firms adapt to new business opportunities and energy price changes; *ii)* how individuals change their preferences; and *iii)* how green technologies are developed and diffused in the market.

Prioritisation among the different interventions needs to be based on an accurate screening of possible complementarities among the Urban Green Growth Policy Framework greening opportunities and challenges. In other words, within a well-developed strategy, interventions in one domain unlock positive developments in other domains. For example, a large retrofit programme for public buildings can be a powerful boost to skilled and semi-skilled employment generation. However, the impact of the programme on local employment can be maximised only if well-trained workers are locally available. Higher competition among suppliers of retrofit services, as well as technological innovations that can reduce the cost and the carbon-intensity of these materials, is also needed to improve the cost-efficiency of public retrofit investments. Synergies and possibilities for leverage do exist, and urban policy makers should develop capacities to spot and use them. More knowledge of how the local economy works and a strong capacity to pursue interdepartmental programmes are essential prerequisites to seize the employment and growth potential of the low-carbon transition. Table 5.1 provides examples on how the different elements of a green growth strategy can interact, in this case related to building policies.

Table 5.1. **Green growth policy synergies: The example of building policies**

Pro-growth policies → Greening opportunities ↓	Infrastructure and investment policies	Innovation policies	Human capital policies
Buildings	*Retrofitting of public buildings. Publicly supported financing mechanisms for individual investment in energy efficiency technologies. Publicly supported financing mechanisms for individual investment in distributed renewable energies (*e.g. *solar PV).*	*Support for firms producing building energy-efficient technologies. Labelling and standards for building energy efficiency. Facilitation of contracting with Energy Service Companies (ESCOs) for retrofitting.*	*Retraining of traditional economy workers for energy efficiency retrofitting and installation of distributed renewable energy generation systems.*
Impact on jobs	Building retrofits and installation of distributed renewable energies and energy efficiency technologies is labour intensive.	Low and high-skill job opportunities at firms producing building energy efficiency technologies.	Facilitates transition to job opportunities in building energy efficiency retrofitting and installation of distributed renewable energy technologies.
Impact on demand for green goods	Public support lowers barriers to consumer demand for energy efficiency and distributed renewable energy technologies.	Labelling and lowering information barriers to energy efficiency programmes can increase consumer awareness and demand.	–
Impact on urban attractiveness	New and retrofitted energy efficient or energy-neutral buildings can attract firms seeking lower energy costs.	Funding and technical assistance, and clear labelling standards, can attract energy efficiency retrofitting and renewable energy installation firms.	Skilled labour pool can better attract energy efficiency retrofitting and renewable energy installation firms.

There are several examples of how such an approach of fostering policy complementarities can be achieved. One example is integrated strategies for transportation and land-use planning. With limited budgets, cities now face the dual challenges of

providing transportation infrastructure that meets the needs of a growing economy while reducing pollution, congestion and GHG emissions, and providing land and services to expand the tax base while avoiding the negative economic, environmental and social impacts of sprawl. To meet these challenges, many urban areas are putting the priority on orienting development around public transportation and public services delivery (*e.g.* Copenhagen's Finger Plan). In some cases, this takes the form of spatial plans in which cities aim to direct growth around an urban core or a polycentric system of urban core areas. In other cases, cities have focused primarily on promoting development that extends outward around public transportation networks, public services and urban amenities. What these strategies have in common is their goal of supporting economic growth through means that also reduce energy consumption and other resources.

Multimodal public transportation delivery also responds to sustainability and job-growth priorities. The synergy between transportation and economic activities generates new employment opportunities in entertainment, recreation, dining, banking, commerce and community services. Integrated urban strategies for sustainable transportation can serve as incubators for green technology innovations, providing a good framework for evaluating the costs and benefits of new technologies with wide industrial applications, such as hybrid engines, hydrogen fuels and sensor networks. For example, the City of Hamburg has sought to support the development of hydrogen-fuel buses by combining its purchasing power with other cities, Barcelona, Berlin, Cologne and London, with the goal of creating demand for 100-150 hydrogen buses (EurActiv, 2009).

Another example of policy complementarities is when cities improve their environmental effectiveness and attract new firms and jobs through combined investments in transportation networks and information and communication technology (ICT). Efficient intra-urban mobility is crucial to realise the economic advantages of agglomeration – that is, cities that are more connected and more compact. There are important complementarities between ICT and transportation investments. Both respond to the need to improve connections between people and businesses, reducing costs of commuting and information transfers. ICT innovations, when applied to public transportation systems, can improve service quality and thus ridership more cost-effectively than large-scale capital investments.

A renewed interest in compact city policies

In some countries, the green growth agenda has generated a renewed interest in a compact city policy approach (OECD, 2011b). The latter goes in the same direction of fostering complementarities between economic and environmental objectives. In general, successful "compact cities" rely on transportation linkages, mixed land uses, and high-quality urban services. Different urban forms may have the same density, however, and the policy goals, strategies and tools applied to the concept can vary (Fouchier, 1997). This underlines the importance of local contextualisation. Applying densification policies or congestion charges can have long-term positive effects on the economy due to technological innovation: high-quality, more-efficient public transport that responds to economic needs and better connects labour with employment, thus increasing firms' productivity, etc. Land-use zoning policies that allow for higher densities and greater mixing of residential and commercial uses can enhance transportation goals by reducing trip distances while strategic mass transit linkages can attract development and promote compact growth. Long-term growth plans in a number of OECD metropolitan areas aim to maximise these complementarities (*e.g.* Paris, New York, London).

There are limits to the urban green growth paradigm

There are some limitations to the concept of green growth that policy makers at both the national and regional/city levels must keep in mind as they move forward.

First, there is a potential issue of a zero-sum game. Green growth Scenarios 5 and 6 hint at one of the biggest concerns, namely that there may be winners and losers as cities begin to work towards green growth. Some urban economies may grow a great deal, others will grow less, and some might potentially shrink, if the process is managed poorly. In a similar vein, some business sectors may thrive, while others may see little change in economic activity level. To the extent a city is heavily dependent on businesses likely to decline as a result of competition from green growth-related businesses, the economic impacts could be considerable. National governments will be concerned about the net impacts across all regions in their country; local government officials will naturally be more concerned about the localised impacts. The question of a zero-sum game among territories in the race towards green growth development is a concern for national policy makers.

Second, cities are not in an equal position. There are several baseline variables (Table 5.2) that link to how successful urban green growth initiatives will be over different time periods. Whether these factors put the brakes on or accelerate green growth will depend on how well local officials assess their greening needs and opportunities, and structure an implementation strategy that leverages the support and involvement of other key stakeholders. The baseline variables include the city's natural resources asset base, the technology already deployed (which may constrain future technological investments), local economic conditions, and local political capacity to act.

Third worth noting in this discussion is the prominence of social equity arguments, and the idea that these variables can shape decisions made in the name of environmental protection or economic growth. Ideally green growth strategies can be crafted so there will be few or no losers, addressing both short- and long-term displacement problems and other inequities that may occur as a city transitions to a new growth paradigm.

Last but not least, moving towards a low-carbon, more sustainable society will require significant upfront investment. Existing urban revenue sources could be "greened": congestion charges and road taxes can reduce car travel and fund green infrastructure; local energy fees that put a price on wasteful energy use can increase efficiency; and property taxes can stop favouring urban sprawl and start encouraging development in the urban core and around transportation linkages. National governments could also green urban finance by redesigning grants to sub-national governments to correct incentives for unsustainable behaviour and reward cities that create environmental benefits beyond their borders. However, acting on green growth in cities will require new sources of funding. Carbon finance for cities as well as public-private partnerships emerge promising tools. A better understanding of advantages and limits is however necessary to extend their use on a wider scale.

Table 5.2. **Baseline variables that link to how successful urban green growth initiatives will be**

Resource environment	**Natural resource base:** Many local greening and green growth strategies seek to harness naturally occurring ecosystem services in or near the city. For instance, water from deepwater lakes can be used to cool buildings. Abundant sun, wind or other power supply sources can facilitate – or hamper – the development of renewable energy. Circumstances can change over time as technological innovation and efficiency improvements occur. Another type of natural resource may relate to the dominant power supply sources in a city, as regions with large amounts of coal deposits may find proximity to these resources gives them an inexpensive and relatively secure fuel supply. This too can influence the viability of other green growth options. **Climate/geographic conditions:** A city's location (*e.g.* coastal *versus* inland) and climatic zone (*e.g.* hot/cold/temperate) may also help to determine its greening priorities. In the face of climate change, coastal locations may focus green growth plans on climate adaptation strategies. Weather and climate patterns may also be linked to past and planned technology and infrastructure investment decisions (*e.g.* district heating and cooling technology). **Technology/infrastructure:** Historic investments in technology and essential infrastructure have long been linked to path dependency or technology lock-in (Unruh, 2000, 2002), which can dramatically shape a city's path toward green growth. These sunk investments may offer short-term cost advantages that prevent alternative technologies to effectively compete on price. **Urban form/built environment:** A city's land-use patterns and transportation system contribute to both density and urban form, which are essential levers for a number of green growth issues (*e.g.* transport/mobility options, energy system design, water supply and treatment options, access to green space, amount of permeable surfaces, etc.).
Policy and economic environment	**Policy competency and level of engagement:** The policy making powers assigned to local authorities determine their ability and "willingness to act" (Hammer, 2009) in selecting green growth issues and policy instruments. Whether key infrastructure assets (*e.g.* the water supply, power-generation facilities, the public transport system), are owned and operated by local, regional or federal authorities or the private sector influences the extent to which a city is able to mobilise these assets for greener growth. **Industrial/economic base:** The state and structure of the local economy can influence the locus of a city's green growth strategy. Heavily industrial cities may find that pollution and escalating energy demand top the list of issues to be addressed through a green growth strategy, while cities dominated by a service-based economy, like tourism, may pursue greening strategies that enhance recreational amenities. **Other economic factors:** Policy makers should also understand how other economic factors might influence green growth initiatives. Cities with low per capita income or high corporate tax rates may find it difficult to finance green growth. The local elasticity of demand for essential services, such as energy and transportation will determine the extent to which green growth policies drive up the cost of these services and, ultimately, price some consumers out of the market. Human capital can also shape the type and sustainability of green policies.

The contribution of rural areas to a green growth regional development strategy

Rural development is as crucial in taking forward the green growth agenda as the contribution of cities. While agglomeration policies are valuable in encouraging economic growth, policies cannot depend on agglomeration alone. Rural areas, for example, will always host some population, related to past or current rurally based economic activity; and migration of the more mobile people to cities can result in disproportionate costs in the supply of public services to the residual population. It therefore makes good public policy sense to search for untapped growth potential and look to exploit regionally specific assets in rural areas to the full. Those assets are dominated by natural resource products – food, water, forest products, minerals and scenic attractions that can be a basis for the tourism and leisure industry.

Taking the need for green growth in rural areas as a starting point, and the need to make the best use of rural assets as sources of future growth, a key challenge for all countries is how to achieve the best use of land as a resource, within its long-term carrying capacity. As with water, the pressures on land use are building, given increasing population, and changing weather patterns. Rising demand for food is putting more pressure on arable land; demand for more homes, business and leisure developments are often met by sprawl onto land currently used for agriculture or forestry; climate change

imperatives have created big new demands for biofuel crops where few were grown before; at the same time, governments have agreed globally to put more emphasis on biodiversity – especially through mechanisms to deter the loss of rainforest from conversion to seemingly economically more valuable uses. Development policies should be addressing how to achieve the best outcomes from land use, if the world is to achieve the best use of this finite resource and hand it on in good order to future generations.

In a world of increasing population, and increasing consumption per head, pressures on versatile land are increasing. Land is a finite natural resource being called on to provide ever more services, in greater volumes. Greater pressures will bring greater tensions between those services. Many of the services are part of the production of essentials of life – food, drinking water, flood management, biodiversity, renewable energy and stored biomass in the shape of forestry and carbon-rich soils. The next section describes one response to the potential of green growth rurally – harnessing renewable energy potential, which is of increasing importance given climate change. But there is a wider challenge: climate change and urbanisation are reducing the amount of fertile land capable of delivering life essentials and increasing the potential for weather and human conflicts to intensify commodity shortages and price spikes. Countries should be looking to make more of the green growth potential of their land, though the amount of exploitable land is likely to shrink.

This makes it more important for rural development to take account of the green growth agenda and, looking to the future, capitalise on rural land for the various contributions it can make to better lives for all people. A key question, in the interests of the long-term global economy, is how countries will reconcile the competing pressures on land locally in a way that can contribute positively to the global imperative. What are the best governance models to deliver rural development that embraces both private goods such as food and biofuel, and public goods such as biodiversity and sequestered carbon?

The aim will be to look at the governance arrangements that countries and regions have put in place that are relevant to influencing the way that land-based assets are exploited for their sustainable development potential. Do countries' and regions' individual combinations of regulation, subsidies and taxation encourage optimum use of land? Where can best practice be found? Addressing these questions will require a broader view integrating OECD countries, as well as those countries with large land resources, such as Brazil, the Russian Federation, India, China and South Africa (BRICS).

Like the work on water, innovation and green growth, land-use research and policy analysis require a cross-cutting approach. In many countries, land-use responsibilities also require an approach running across ministries for communities, development, agriculture and environment, if the goal is a properly joined up strategy. At the level of the European Union, there is no competence for land-use planning, so the relationships between the programmes – for example on regional development, agriculture and rural development, energy and transport – can be difficult to assess. The land-use governance agenda is therefore an important area for further work in light of the OECD's Green Growth Strategy.

An employment strategy for rural areas: Fostering renewable energies

Many OECD governments see the renewable energy supply chain as a promising sector for the creation of valuable and stable jobs. This is particularly important in rural areas, since exploitation of the major renewable energy sources is space-intensive and thus likely

to develop primarily in rural areas. Worldwide investment in renewables increased more than tenfold between 2002 and 2010, reaching USD 240 billion (Ernst and Young, 2011). This surge in global investment is strongly supported by public policies aimed at stimulating the development of renewable energy sources. These policies reflect three major concerns: climate change; energy security; and job creation. The first of these is a well-established driver of policy change, while the second has grown in salience over the last decade, owing to the upward trend in oil and gas prices and geopolitical instability in many hydrocarbon-rich areas of the world. The emphasis on job creation has become ever more important as a result of the economic crisis and is seen in particular as a way to revive some lagging rural economies – in particular, since renewables, being space-intensive activities, are in some respects fundamentally rural undertakings.

The deployment of renewable energy is thus increasingly seen as a key development opportunity for rural regions and also a way for governments to give substance to "green growth" rhetoric (see Chapter 4). However, economic and workforce development opportunities are often constrained in rural areas by limited infrastructure and/or limited availability of the necessary competences to deal with new sectors or new technology. To reverse this trend and tap rural regions' endowment of renewable sources of energy will require improved learning capacity and the accumulation of competencies in rural areas. If successful, regional specialisation in the production of renewable energy is likely to percolate to other sectors, like construction, manufacturing, and services, thereby multiplying job opportunities along the supply chain localised in the region. Regional governments are well positioned to magnify the impact of this regional specialisation. In many OECD countries, they have a key role in the design and/or implementation of national energy strategies. Regional governments are also well placed to develop innovative policy solutions that can be scaled up into supra-regional or national programmes, or to provide laboratories for national pilot programmes.

What are the likely labour-market impacts of renewable energy?

Forecasts of substantial employment creation have helped increase public support for investment in renewable energy. According to UNEP (2008), "given rapidly rising interest in energy alternatives, future years may well see worldwide employment soar, possibly as high as 2.1 million in wind energy and 6.3 million in solar PVs by 2030, and on the order of 12 million jobs in biofuel-related agriculture and industry". There are positive forecasts also for activities that are related to green power generation. For instance, the environmental goods and services (EGS) sector is estimated to be worth over USD 600 billion world wide and is projected to rise to just under USD 800 billion by 2015, with very positive impacts on employment (Selwyn and Leverett, 2006). Value added is mainly due to rent, interest and profit, however, implying that GDP data hugely overstate the benefits of this investment for the regions concerned, which depend mostly on wages.

Thus, while green power generation will largely be located in rural areas, the benefits for local economies are uncertain. The impact on labour markets will depend on the job multipliers associated with the activities located in a given region. For instance, the stricter environmental regulation needed to encourage the use of renewable energy will probably act as a "job killer" in places specialised in conventional energy production, reducing the number of jobs in this sector. The imposition of stricter climate-change regulation will lead to significant job losses and increasing social fragmentation if appropriate steps are not taken. A study conducted by the Worldwide Fund for Nature shows that in the United States,

net job losses due to clean energy policies are most likely to occur in sectors that are usually located in rural areas: coal mining, oil and gas extraction, oil refining, and electricity and natural gas utilities (Kammen *et al*., 2004). Similar patterns are likely to be found in other OECD economies.

Hence, to assess the impact of green power on rural economies, both macro and local levels must be taken into account. At the macro level the issue is net new jobs, as evidenced by a rise in the participation rate or a fall in the structural unemployment rate. To what extent will green power simply displace jobs in traditional power supply or offset employment losses in other sectors that are negatively affected by climate-change mitigation efforts? If green power is more expensive, how many jobs will be lost due to lower GDP? At the local level, it is key to understand how many jobs are associated with each specific project and how durable they are likely to be. Certain jobs will be in operation and maintenance (O&M), while others in the construction of the needed facilities. As a consequence, there will be both temporary and long-term jobs created in regions.

A thorough assessment of employment effects should thus focus on job multipliers, the backward and forward linkages green power can generate at the regional level, and income effects. Power generation (O&M) typically creates relatively few local jobs and has small local job multipliers.[3] It is a capital-intensive activity and has low linkages to the local economy. This is especially true for those forms of renewable generation that rely on free energy inputs, like wind and sun. Conversely, indirect job creation at provincial/state or national level can be significant. For instance, a region can specialise in the production of component manufacturing for renewables. Finally, displacement effects at the national level can offset many of the renewable energy effect jobs. Due to lock-in dynamics that may take place at the national level, some regions will become home to core high-value activities in the renewable energy supply chain, while others will host the low-value added parts, with lower impacts on employment creation and regional development.

The number and the unit cost of new jobs created vary according to the activity in which the regional economy specialises. Although energy generation is a capital-intensive activity with a low impact on the labour market, the jobs created are usually valuable and stable. The situation is completely different for construction, which typically has a far higher job multiplier and can generate up to 30 jobs for each USD million invested. However, construction is a short-term activity, so it does not affect the long-term economic trajectory of rural communities in the same way. Manufacturing also has high multipliers, and it is a long-term activity (Table 5.3). Regions that are able to increase their specialisation in manufacturing activities related to renewable energy are thus likely to benefit from a large and lasting increase of their workforce.

Table 5.3. **Employment multiplier estimates**

Province/State	Local
Generation (O&M) – 7-8 jobs per USD million in output.	Generation (O&M) – 0.7-1 jobs per USD million in output.
Construction of generation – 19-30 jobs per USD million of construction cost.	Construction of generation – 12-15 jobs per USD million of construction cost.
Manufacturing of electrical equipment – 16-24 jobs per USD million of output.	Manufacturing of electrical equipment – 10-14 jobs per USD million of output.

Source: Freshwater, D. (2010), "Green Power, Green Jobs", presentation at the launch seminar for the OECD Project The Production of Renewable Energy as a Regional Development Policy in Rural Areas, Montreal, 15 September, *www.oecd.org/dataoecd/31/1/46186430.pdf*.

Establishing such a specialisation will not be easy, as competition among suppliers in these markets is increasingly intense, notwithstanding the rapid growth in demand. All countries undertaking renewable developments anticipate export activity, and it is unlikely that all of their ambitions can be satisfied. Moreover, developed country forecasts may need to take better account of developments in China, whose increasing specialisation in green energy production is likely to influence specialisation patterns in other regional and national economies. Since it is very difficult for OECD regions to compete with China on price, sustaining a successful manufacturing specialisation over the longer term is likely to depend on continued innovation and quality improvements (see below).

The timescale over which the national and local specialisation takes place is crucial. The long-term goal of many governments is to displace existing generation from conventional sources with renewables. The faster the displacement takes place, the greater the industry's annual installations and economic impact in terms of jobs and output, but the shorter the window of displacement becomes.[4] After the displacement takes place, there is only replacement, so the industry shrinks unless it can export.

Renewable energy prices represent another key issue. While the objectives related to climate-change mitigation and energy security are coherent with higher prices for energy, it might be difficult to achieve a net increase in employment with higher energy costs. Because the price elasticity of demand for energy tends to be low, when energy prices go up, consumers tend not to reduce demand for energy very much, but discretionary spending on other goods and services declines. The impact on the labour market is negative, as lower demand causes a general reduction in employment.

How to develop the knowledge base for renewables in rural areas?

Rural areas that have accumulated competencies and are able to support a multidimensional learning process are likely to benefit most from the deployment of renewable energy. This can happen when investment is focused on economic activities compatible with the renewable energy supply chain, and when the region features a diffused propensity for learning, which usually underpins self-employment and entrepreneurship. In this case, the local community starts investing local resources in the renewable energy supply chain, enhancing the regional specialisation. It is also possible that investment will have a limited impact on the local productive fabric. For instance, large-scale installations located in small rural communities generate some valuable and stable jobs and a profitable rent for the local community through local taxes. This is a positive dynamic for local communities, as they acquire financial resources and produce key public goods that improve dwellers' well-being and place attachment, but few or no links between the local business community and the deployment of renewable energy are developed. In other cases, investment in renewable energy can trigger endogenous development.

The legacy of past economic specialisations can create opportunities for such development. For instance, a given region can be specialised in the production of electricity from conventional sources and take advantage of this specialisation to develop renewables. This is typical of many rural areas, as large conventional power plants are unlikely to be located in large urban centres. Accumulated knowledge in electricity production and distribution can easily be integrated into the renewable energy supply chain; thus, pre-existing local competencies support regional specialisation. Manufacturing activities also contribute to regional specialisation in renewables. Installations require components that are shared with other industries. Concentrating solar thermal or photovoltaic plants

need metallic structures that are relatively easy to produce but expensive to transport. Thus, local producers, if present, have a competitive advantage *vis-à-vis* external competitors, in spite of being active in a mature and relatively low-tech sector.[5]

In general, the presence of large-scale manufacturing activities has a positive impact on the regional capacity to specialise in the renewable energy industry. This is due to the availability of codified skills (engineers, for instance) and business services (such as, finance or technical and ICT services).[6] Regardless of accumulated competencies, it is unlikely, and not necessarily desirable, that a region develop a self-sufficient supply chain from product conception through disposal.

Interactive learning is another key component supporting regional specialisation in the renewable energy industry. In general, it is unlikely that advanced research activities will be located in rural areas. However, as the technology to produce energy from renewable sources is not mature, empirical research needs to be done in the field, where the installations are located. The deployment of renewable energy, however, does not depend on research and development (R&D) alone. Learning by searching is just one part of a much broader system based on the transfer of knowledge among actors engaged in the innovation process. As suggested by Lundvall (1992), there are three other kinds of learning, besides learning by searching, that should be taken into account when assessing regional innovation systems: learning by doing, learning by using, and learning by interacting. These three dimensions of learning (*i.e.* innovation capacity) are often found in rural areas; they are intertwined and mutually reinforcing.

The learning system can affect the local propensity to entrepreneurship and self-employment, which, in turn, benefit the regional innovation system. This can be observed in Italy and Spain, where rural areas are home to clusters of small and medium-sized enterprises (SMEs) (OECD, 2008; Boix and Vaillant, 2010). The production of renewable energy, which in these countries is booming, creates new business opportunities for self-employment. The presence of a large number of actors involved in the renewable energy industry enriches the "learning fabric" of the region. SMEs are active in finding business niches as well as clients and valuable suppliers. Even when the basic technology (the scientific information) is imported from outside the region, local actors adapt such information to local needs and potentials, fulfilling a large part of the learning (or innovation, according to the definition used in this assessment) process. This activity is likely to affect the learning capacity of the region. As actors become more specialised and accumulate skills in the new industry, their capacity to learn (innovate) is enhanced.

Entrepreneurship and self-employment feed into popular legitimacy and active participation in regional development strategies. The fact that (external) investment is underpinned by local capital is critical to fostering local innovation capacity. As Kamp (2002) highlights in her comparative assessment of the competitiveness of the wind turbine industry in the Netherlands and Denmark, the technological lead of Danish firms over Dutch firms results in part from the larger number of interactions that take place at the local level. Kamp found that while Dutch firms relied more on learning by searching, due to larger R&D subsidies, the Danes focused on learning by doing. In Denmark, the learning processes have involved a large number of producers and users. Innovative dynamics are intertwined with the geographical, policy and institutional *milieux* that characterise Danish regions specialised in wind energy. In a market where breakthrough

innovations are relatively rare, a diffused learning process that involves a large number of actors at the local level could have a larger impact on local economies than a research centre focused on patenting.

Developing social acceptance and community ownership of renewables

Achieving the long-term objectives for renewable energy development will in part depend on gaining community acceptance. Even in relatively developed markets like Germany, social opposition is emerging as a potential threat to future development. Currently, debates at the level of the *Länder* are halting the construction of the "energy highways" that would transport large amounts of renewable energy from the rural north to the urban south. Opposition is coming from different local constituencies (rural dwellers, farmers, and environmentalists) concerned about the impact of the power line on health, landscape, and wildlife (Fröhlingsdorf, 2011). This regional opposition is distinct from the general popular support for Germany's ambitious renewable energy development goals. In this respect, Germany is by no means unique: broad public support for aspirational goals often sits alongside fierce local resistance to concrete projects. In this context, the governance responsibility for achieving renewable energy objectives falls largely on the shoulders of sub-national authorities charged with overseeing the deployment of renewable energy.

Regional governments are well placed to foster social acceptance where it is lacking most: at the community level. As governments seek to increase renewable energy capacity, the primary concern is with community acceptance, which is most closely tied to implementation. Socio-political acceptance is generally high, as numerous surveys have shown. Indeed, governments have exerted significant effort assessing the technical and financial aspects of renewable energy policy to ensure socio-political and market acceptance, particularly during the policy design phase.

The lack of social acceptance and involvement of local communities in the decision-making process related to renewable energy deployment has two main negative impacts. First, the local community may simply reject (further) deployment of the new technology. Alternatively, deployment may proceed but without the active involvement of local actors. This is particularly evident in the case of large-scale installations located in small rural communities. The high preferential tariffs generate large revenues for the owner of the plant to transfer. A small portion of the revenue, which can be a significant amount of money in the local context, is paid to the host community for the use of their land, and that is the extent of local engagement. This leaves the renewable energy development entirely dependent on outside actors and reduces the potential of the investment to act as a spur to endogenous growth. Local actors, having little or no involvement in the development strategy, fail to look for investment opportunities along the renewable energy supply chain. Ultimately, this has a negative impact on the potential for triggering self-employment and entrepreneurship, which are pillars of regional development processes.

The challenge for regional governments is to implement policies linked to renewable energy in such a way that economic, environmental and energy security goals are all achieved. To do so, they will need to find the sufficient level and form of compensation for communities without sacrificing the economic viability of renewable energy projects (and therefore external investment). In other words, they need to ensure that the benefits of renewables (wages, rent, interest and profit) are appropriately distributed among all groups contributing to their successful deployment. The constellation of affected groups will vary

by technology and scale of deployment; in general, it consists of investors, developers and "host" communities. This challenge is compounded by the difficulty in assigning value to the "costs" borne by local communities. The market costs are well understood and relatively straightforward, but the costs to communities are more complex. Typical concerns or "costs" cited by communities include changes to landscapes, nuisance (*e.g.* noise or shadow flicker), environmental impacts (*e.g.* wildlife and water quality) and the potential for reduced property values (Hubert and Horbaty, 2011). Many communities also feel excluded from the decision-making processes concerning the sites and technologies selected for their area (Bryden, 2010). For land-intensive renewable energy sources like large-scale solar and bio-energy, the potential for competition among land uses can also fuel social opposition. Landscape and land-use concerns are particularly strong in rural areas where local income is often tied to the land through agriculture and related industries, as well as tourism.

Regional authorities can foster community acceptance in two ways: increasing understanding of renewable energy projects and ensuring local benefits. In an analysis of the social acceptance of wind farms, IEA (Huber and Horbaty, 2011) highlights how "reducing the risk for future surprises, early and transparent communication can even strengthen projects and assist in building public support", concluding that "public consultation on projects cannot begin too soon". Regional governments can facilitate this upfront effort by requiring community consultation during the project development phase and streamlining permitting processes so communities understand how they will be effected by renewable energy projects. What is more, regional authorities are well placed to understand how renewable energy projects related to cultural and regional specificities. Investors will also benefit by understanding the community's priorities from the outset, rather than investing in costly designs for inappropriate projects (Huber and Horbaty, 2011).

Communities will be more willing to accept some of the "costs" of renewable energy installations if they stand to gain from them. In this way, there is a strong link between the need to focus renewable energy development on accumulated competencies and gaining community acceptance. Regional governments can ensure local benefits by creating opportunities for communities to invest in or directly contribute to the production of renewable energy. Creating opportunities for community investment or financing counteracts the popular perception that large utility companies and corporate investors are the main beneficiaries, which has proven problematic in the Netherlands and the United Kingdom. These cases can be contrasted with Denmark, Finland and Sweden where the local populations tend to support renewable energy initiatives. In both the Netherlands and the United Kingdom, the local content of value added is generally very small, being limited to land leases and wages, for example. By contrast, farmers and local co-operatives in Denmark have long had the opportunity to invest in wind farms and increase the local value added from the industry. These efforts eased the path for renewable energy development and make investment more politically secure (Midttun and Koefoed, 2003; Bryden, 2010).

Managing water: What multi-level governance arrangements should be put in place?

As many other environmental assets, water is a public good that has strong externalities on several policy areas and implies local considerations and territorial characteristics at rural, urban, basin and cross-border levels. Beyond scarcity issues, the

current "water crisis" is fundamentally a governance crisis. In a global context of fiscal consolidation, social, technological and environmental transformation, "adaptive" water policies in response to climate change, demographic and urbanisation pressures rely more and more on cities and regions. But reforming water policy requires the prior understanding of complex institutional settings.

Along these lines, institutional data collection from an extensive survey sent to 17 (half) OECD countries, allowed OECD to: *i)* comprehensively map the allocation of water responsibilities at central and sub-national government levels; *ii)* measure perceived "implementation" obstacles in water-policy implementation; and *iii)* review existing governance tools to bridge a series of co-ordination and capacity gaps (see OECD, 2011b). The main insights from this survey are detailed in the following sections.

There is a highly fragmented sector with multiple stakeholders at central and sub-national levels

A pervasive feature of water systems is the lack of a "master plan" for assigning water-related tasks across ministries and levels of government. In most cases, the central government plays a strong role in water-policy design, regulation and implementation. In some countries (France, the Netherlands, Spain) this role is rather focused on strategic planning, and priority setting, while in others (Korea, the United Kingdom), it is more oriented towards economic and environmental regulation. The role of central government is somewhat "minor" in federal countries that transferred most water competences to sub-national governments such as the United States (Box 5.1) or Belgium, where water responsibilities are so scattered across states or regions that it is almost impossible to capture a "national institutional mapping".

Several ministries, public agencies and departments are usually involved in water policy at the central government level because of the interconnectedness of different issues (agriculture, energy, territorial development, spatial planning, health, investment, etc.), thus generating a high degree of fragmentation across policy areas and inherent risks of "silo" approaches in the absence of inter-ministerial co-ordination.

As Figure 5.7 shows, this number ranges from 2 ministries in the Netherlands to 15 public agencies in the case of Chile. This indicator helps "measure" the fragmentation of roles and responsibilities, based on the assumption that the more actors there are, the more "complex" the situation is. But it has to be analysed in light of the governance tools adopted to overcome such complexity. There are several examples of highly fragmented contexts (Canada, France, Mexico) where the multiple actors and layers usually perceived as obstacles to policy coherence have been compensated by the adoption of sound co-ordination mechanisms (see below) that reduced, to a more or less important degree, the impact of sectoral fragmentation.

In OECD countries, sub-national governments are always involved in water policy, but to varying degrees (Figure 5.8). In federal states with important geographical and hydrological disparities (Australia, Canada, the United States), or strong regional characteristics (Belgium), local and regional authorities are the main actors in water-resources management and service delivery. In most cases (EU countries), sub-national governments play a significant role in the design and implementation of water policies, together with the central government, while in some countries (Chile, Israel, Japan, Korea), they are mostly "implementers" of central government policies, with low involvement in the "design" stage.

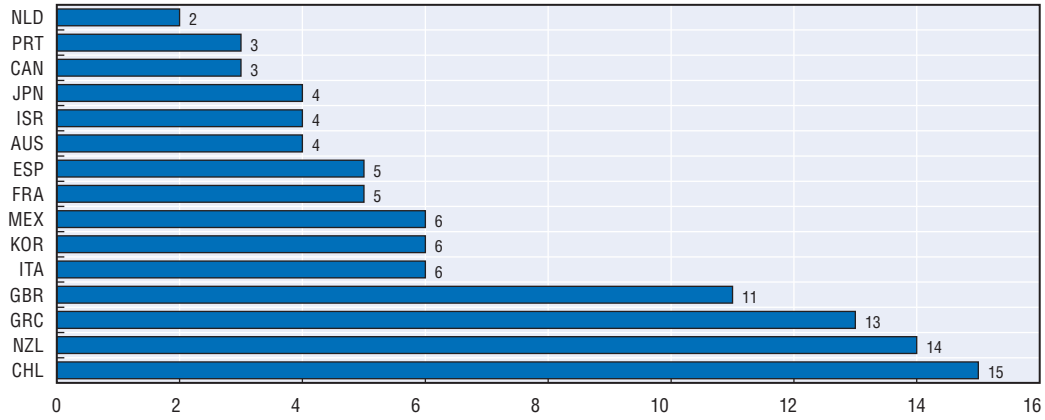
Box 5.1. **Mapping roles and responsibilities in water policy: The challenging case of the United States**

In the United States, on most aspects of water-supply planning and management, there is no central (national) policy, and no one agency with responsibility or oversight, although at least 20 federal agencies have some role in the area. In addition, there are very few significant river basin scale organisations and the institutional mapping and governance challenges vary greatly from one state to another. In all, more than 50 000 agencies at federal, state, local and county levels are involved in water policy, hence the difficult task of achieving a comprehensive mapping.

Some states (*e.g.* California) have adopted a co-ordinated institutional framework for state-level water planning and management, but in most others, this is also largely absent, and the void is mostly filled by around 16 000 municipal water agencies. The state of Colorado is somewhere near the middle of this continuum. In most states, water supply planning is conducted almost exclusively on a project-by-project basis, often at the municipal level, and often without direction from any federal or state-level policy framework. And even at the project scale, there is often no clear criteria or policies for selecting among options, and in some cases, no planning or reporting requirements of significance.

Compared to sectors such as energy or transportation, water-supply planning and management is not merely decentralised, but rather fragmented, incomplete, and almost unsophisticated. However, there is one exception: water-quality management. In this case, there is a well-established national policy (the Clean Water Act), a federal agency (Environmental Protection Agency [EPA]) authorised to enforce the policy through a programme based on permits. The programme allows implementation to be conducted by state agencies that meet standards established by the EPA, which most states do. Additionally, there are also clear federal laws that deal with other environmental aspects of water management, such as the preservation of biodiversity, wetlands, and rivers.

Figure 5.7. **Number of central government institutions involved in water policy, 2010**



Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Publishing, Paris, forthcoming.

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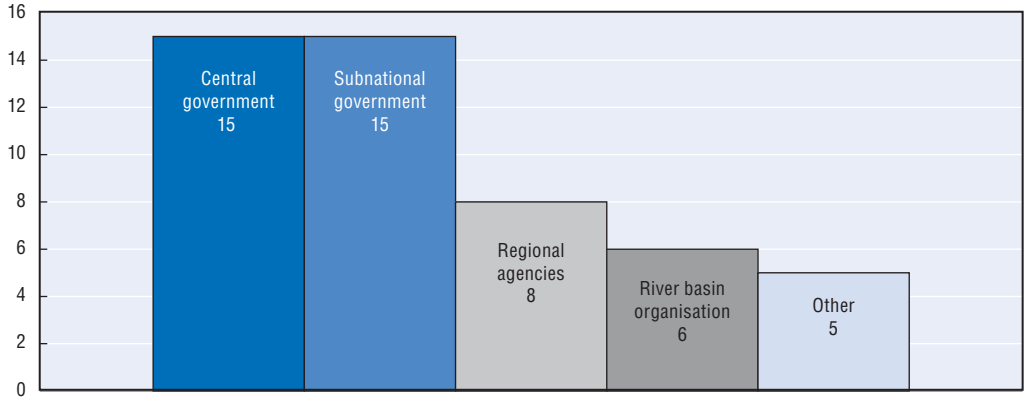
Figure 5.8. **Type of actors involved in water policy budget**



Note: There are 18 responses for the 17 countries surveyed. As water is a regional issue in Belgium, Flanders and Wallonia replied separately. Brussels is not covered.

Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Publishing, Paris, forthcoming.

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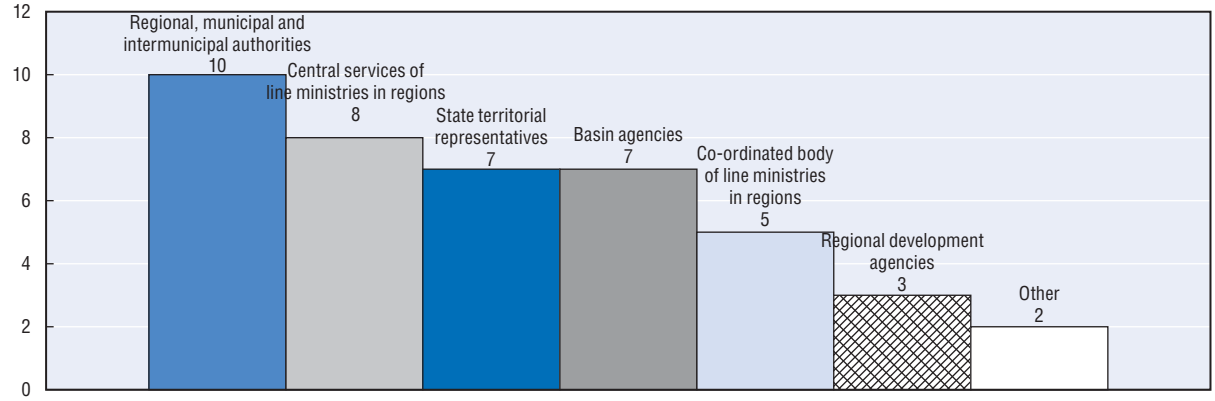
As Figure 5.9 shows, regions, municipalities and inter-municipal bodies are the primary actors in charge of implementing central government policies at the sub-national level. In most OECD countries surveyed (15/17), the latter are involved in water-policy budgets together with the central government. In France, for instance, the three levels of sub-national governments are involved. Municipalities, usually in charge of public services of water, can also have planning functions. "Departments" (sub-national government between municipal and regional layers) contribute to territorial development and rural equipment through a series of financial subsidies to municipalities for investments related to water and sanitation infrastructure, and regions can also co-fund water and sanitation networks in the framework of the *Contrat de Plan État-Régions*.

Figure 5.9. **Implementation of central government water policies at the sub-national level, 2010**



Note: There are 18 responses for the 17 countries surveyed. As water is a regional issue in Belgium, Flanders and Wallonia replied separately. Brussels is not covered.

Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Publishing, Paris, forthcoming.

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Central services of line ministries in regions and state territorial representatives (STR) are key actors in the implementation of water policies alike. In unitary countries such as Japan (regional offices of individual ministries), Israel (Israeli Water Authority) and Korea, representatives of line ministries in regions are the main actors in charge of implementation at sub-national level. Central services representing line ministries in regions can also play an important role in countries that have somewhat decentralised their water policy making, whether these are federal states (Belgium) or unitary (New Zealand).

Thus, no systematic correlation can be drawn between a given country's institutional organisation (unitary *versus* federal) and the institutional mapping of water policy. On the one hand, some federal countries (Belgium, Canada, the United States) have almost entirely devoted water responsibilities to lower levels of government while in other federal states (Australia, Mexico), the central government still plays a strong role (strategic planning, regulation, etc.) in ongoing water-policy reforms. On the other hand, though some unitary states still retain significant water responsibilities at central government level with highly centralised water policy making (Chile, Israel, Japan, Korea), most OECD unitary countries (France, Greece, the Netherlands, New Zealand) have *de facto* devoted responsibilities to lower levels of government. In all cases, the institutional mapping of water policy also relies on environmental, territorial and hydrological considerations. The plurality of mutually dependent actors across ministries and public agencies, between levels of government, and at sub-national level raises significant multi-level governance challenges, hence the need for "diagnosing" capacity and co-ordination challenges likely to hinder integrated water policy.

There are significant multi-level governance challenges in water policy

Table 5.4 details the seven co-ordination gaps experienced by OECD countries in water policy, whatever their institutional contexts. Respondents from central administrations, river basin organisations and regulatory agencies in the 17 countries surveyed were asked to rank multi-level governance challenges from one (not important) to three (very important) according to proxy indicators. The degree to which water policy implementation may be

Table 5.4. **Frequency of multi-level governance gaps in OECD water policies, 2010**

"Important" or "very important" gap	Number of countries or regions	Examples of countries or regions
Funding gap	11/17	Australia, Belgium (Flanders), Chile, France, Greece, Israel, Korea, Mexico, New Zealand, Portugal, Spain, the United States (Colorado).
Capacity gap	11/17	Australia, Belgium (Flanders), Chile, Greece, Italy, Korea, the Netherlands, Portugal, Spain, the United Kingdom, the United States (Colorado).
Policy gap	9/17	Belgium (Flanders), Canada, France (sub-national actor), Greece, Israel, Italy, Korea, Spain (sub-national actor), the United States (Colorado).
Administrative gap	9/17	Australia, Greece, Italy, Korea, the Netherlands, Portugal, Spain, the United Kingdom, the United States (Colorado).
Information gap	9/17	Australia, Chile, Italy, Korea, the Netherlands, New Zealand (sub-national actor), the United Kingdom, the United States (Colorado).
Accountability gap	9/17	Belgium (Flanders), Chile, Greece, Italy, Korea, Mexico, the Netherlands, Portugal, the United States (Colorado).
Objective gap	4/17	Belgium (Flanders), Israel, Korea, Portugal.

Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Publishing, Paris, forthcoming.

hindered by given multi-level governance gaps varies widely in OECD regions but common challenges have been identified. A closer look at each of these gaps is provided in the paragraphs that follow.

Understanding multi-level governance challenges in water policy requires a systemic approach to co-ordination gaps (Table 5.5). These are interrelated, can exacerbate each other and should be approached in a holistic way. For instance, any country facing a sectoral fragmentation of water roles and responsibilities across ministries and public agencies (policy gap) may also suffer from contradictory targets between these public actors (objective gap), which may not favour the sharing of information because of silo approaches (information gap) and is likely to undermine capacity building at sub-national level (capacity gap) since local actors, users and private actors would have to multiply efforts to identify the right interlocutor in the central administration. Promoting co-ordination and capacity-building is a large and critical step toward bridging multi-level governance gaps in water policy.

Table 5.5. **Description of multi-level governance gaps in OECD countries' water policies**

Gap description	Country illustration
Funding gap: The absence of stable and sufficient revenues of sub-national actors is a primary challenge for co-ordinating water policy across ministries, between levels of government, and building capacity at the sub-national level.	Israeli Water Authority (IWA) is responsible for the national water management plan and for the budget (setting the tariffs and deciding on the expenses). IWA obtains the funds to run the national water-management plan from the state of Israel's national budget, rather than directly from the water payments of the users via tariffs. This raises efficiency considerations as well as funding inadequacies in many areas.
Capacity gap: OECD countries are close to universal coverage, but face significant issues to maintain and adapt existing infrastructure to new environmental regulations. Innovative water processes and technologies introduced in response to cost-effectiveness objectives, water scarcity and climate change (desalination, recycling of water use, etc.) require transfers of know-how at the sub-national level.	Greece lags behind in the implementation of the EU Urban Wastewater Treatment Directive, which required all municipal wastewaters to be treated by 2005. The biggest cities are in compliance with the directive but smaller municipalities are facing major obstacles related to infrastructure. In 2002 only two of the wastewater treatment plants discharging in sensitive areas achieved the treatment efficiency required by the EU Directive, mainly because of capacity and funding gaps.
Policy gap: Policy coherence relies on the set up of institutions. When roles and responsibilities are scattered across actors and policy areas of different organisational cultures, sensitivity to lobbies and constituencies (farmers, trade unions, voters, private companies, etc.), segmented working methods can prevail and complicate the decision-making processes. This over-fragmentation has an impact on water-policy implementation at the territorial level.	In the United States, where there is no single agency in charge of water policy, the intervention of 50 000 federal and state agencies, committees and 3 000 county governments affects water-policy formulation across levels of government.
Administrative gap: The mismatch between administrative (local, regional, national, international) boundaries and hydrological frontiers is a major concern in water policy. It deters effective river basin management that requires integrated view and plans.	In Korea, the largest problem in water-resource management is the incongruence between administrative zones and hydrological boundaries. Municipalities often execute budget only considering their own perspective and plan, and this lack of integrated approach and territorially customised water policy affects the efficiency of budget execution.
Information gap: Scattering and fragmentation of the water and environmental data are strong bottlenecks to co-operation across ministries, agencies and levels of government.	In New Zealand, the lack of common information and common national frame of reference has historically been the largest hurdle for policy makers. For example, there has never been a mandated methodology for calculating quantity limits that reflect ecological bottom lines and/or wider community outcomes.
Accountability gap: Periodic assessment of progress toward established policy goals is crucial to understanding whether efforts are effective or not and, when necessary, adjusting the policy. But feasibility is often limited because of political, financial and capacity considerations and low public participation.	In Italy, the outcomes of national water policies are not necessarily quantified in a timely manner and there are few incentives or specific rules to encourage companies responsible for pumping, purifying, and transporting water to consumers to produce relevant data on the quantity and quality of water.
Objective gap: Water policy requires a balance between social, financial, economic and environmental considerations (agriculture, energy, etc.). As water management cuts across many of government strategic directions, the lack of real recognition of conflicts between different government policies regularly creates difficulties for local and regional authorities.	In Colorado (the United States), the inherent trade-offs and potential for conflicts of the water allocation system – with all users in competition – illustrates the objective gap. Municipal water providers spend resources on water supply projects that rely upon the same water or build parallel pipelines. All water supply projects must go through lengthy, adversarial processes to be permitted. Due to little quantification of environmental water needs and the lack of a comprehensive vision including environmental protection, the task of co-ordinating water policies can quickly become resource intensive.

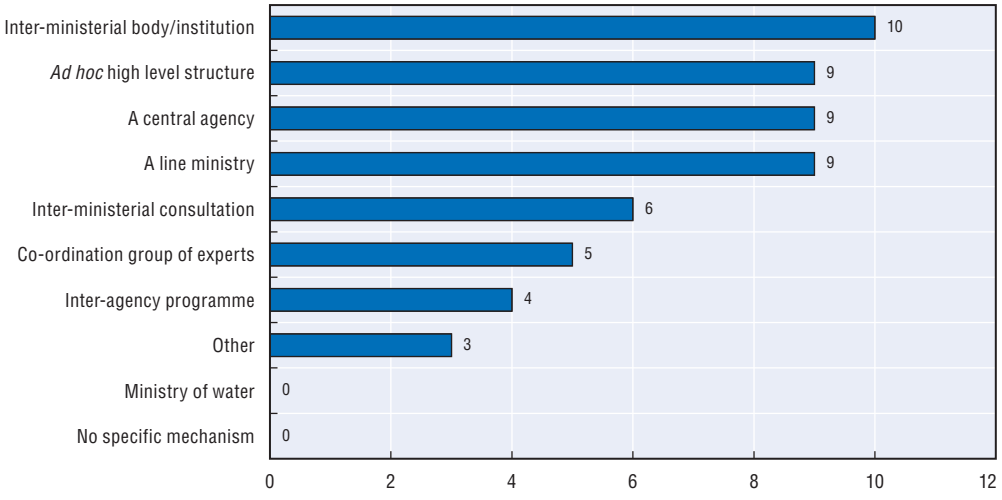
How to implement appropriate co-ordination mechanisms for water policy

Horizontal co-ordination at the central government level

There are several options for co-ordinating water policies – including within a same country – and incentives for adopting them proceed from a variety of parameters. Co-ordination instruments across ministries, between levels of government and across local actors are more or less binding, more or less formal and more or less flexible. Most of them aim to create a framework for combining tools, funds and organisations or establishing a multi-stakeholder platform for dialogue for integrated water policy at all levels. Their creation relies on several factors, ranging from scarcity concerns, which is usually a driver for efficient water management, to institutional mismatch or equity and efficiency objectives including in developed countries and water-rich states. Each co-ordination mechanism can help bridge different gaps and one specific gap may require the combination of several tools (Figure 5.10).

Figure 5.10. **Mechanisms for co-ordinating water policies at the central government level, 2010**

Number of countries



Note: There are 18 responses for the 17 countries surveyed. As water is a regional issue in Belgium, Flanders and Wallonia replied separately. Brussels is not covered.

Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Publishing, Paris, forthcoming.

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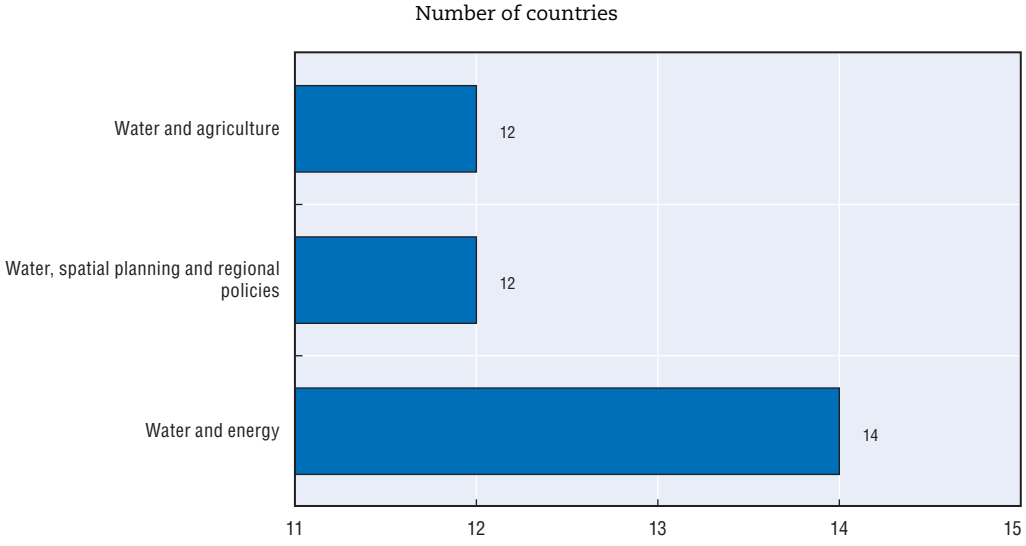
Central governments willing to move away from a sectoral approach to water policies face the issue of how to organise their action to embrace an integrated perspective. Inter-ministerial bodies, high-level structures, and line ministries are the main governance tools used in upper horizontal co-ordination of water policy. More than half of OECD countries surveyed have created these platforms for dialogue and action between public actors in charge of water policy at the central government level. For example, the Canadian Council of Ministers of the Environment (CCME) is comprised of the environment ministers from the federal, provincial and territorial governments. These 14 ministers normally meet at least once a year to discuss national environmental priorities and determine work to be

carried out under the auspices of CCME. The council seeks to achieve positive environmental results, focusing on issues that are national in scope and that require collective attention by a number of governments.

As Figure 5.11 shows, most OECD countries have engaged in efforts to co-ordinate water and other policy areas such as agriculture, energy and regional development. In the latter case, different tools were used. In Australia, the department responsible for regional development policy takes part in the Water Co-ordination Group, the central government primary co-ordination vehicle on water issues. Italy has set up a national strategic framework (NSF) within which the Ministry for the Environment, Land and Sea has identified quality standards for water services. In Mexico, CONAGUA and other federal institutions provide strong support for the *Desarrollos Urbanos Integrales Sustentables* (DUIS) for the building of cities with basic services that do not damage the environment and quality of life. In Korea, the government is building new cities with waterfronts and is restoring riversides by rehabilitating urban rivers into eco-friendly ones. In Israel, co-ordination of water and spatial planning authorities is guaranteed by law. Long-term forecasts are provided in "master plan" reports, according to spatial planning projections.

Figure 5.11. **Horizontal co-ordination efforts across water and other policy areas, 2010**



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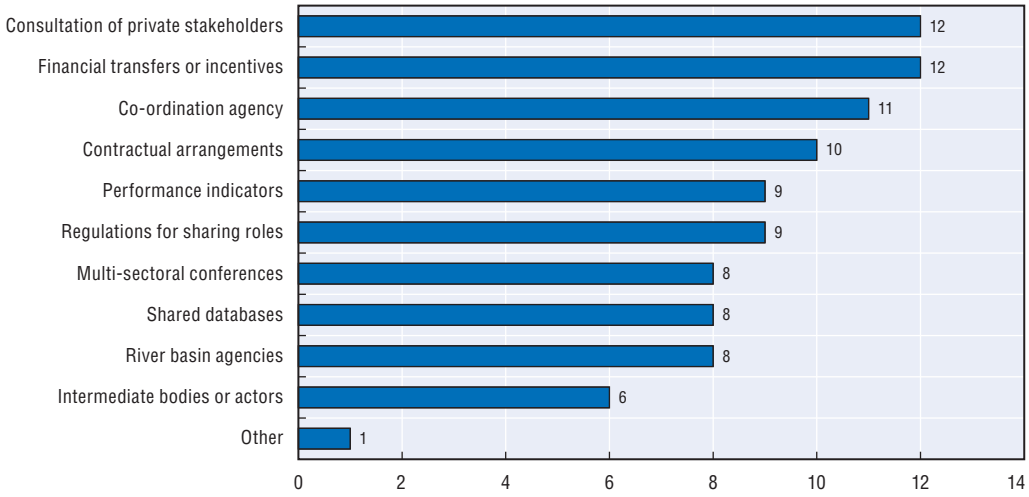
Vertical co-ordination across levels of government

Several OECD countries have adopted co-ordinated actions across levels of government to integrate water policy at different territorial levels (Figure 5.12). Two illustrations of information systems (including monitoring tools) and river basin agencies are provided in Boxes 5.2 and 5.3. Their current use in OECD countries highlights the need for territorial indicators and further economic, social and institutional data collection.

Figure 5.12. **Vertical mechanisms to co-ordinate water policy in OECD countries, 2010**

Number of countries



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Horizontal co-ordination across local actors

Co-ordination across local actors can take different forms, as Figure 5.13 shows. A prominent example is inter-municipal collaboration, which is often used by sub-national governments as a means to reach a "critical mass", increase efficiency, enhance capacity in water policy and foster lower horizontal co-ordination. It helps bridge a number of gaps, including capacity, administrative, and funding to meet the important financing needs required by the construction, operation and maintenance of water and sanitation infrastructure. Most OECD countries are concerned with the question of "relevant municipal scale" for public services and inter-municipal collaboration is clearly evidenced in metropolitan areas where there is an agglomeration effect arising from a set of municipalities that alone are much smaller than the metropolitan whole. Individually their capacity to design, carry out and implement water policies may be limited, but as a group (inter-municipal bodies, etc.), they can be a strong player in the relationship among levels of government while pooling resources, skills and technical expertise. However, when the metropolitan and water boundaries do not match, additional actors at basin and sub-basin levels have to be taken into account when it comes to aligning views, interests and motivations. This also raises the question of the relevance of administrative boundaries in metropolitan regions, for instance where there is barely a metropolitan authority, but a multiplicity of cities and regions implied in governance.

To summarise, it is crucial to address multi-level governance challenges in order to envision long-term strategies for integrated water policy at territorial levels, and to reform current practices. OECD has designed generic guidelines, which intend to serve as a tool for policy makers when engaging in water reform (OECD, 2011c). They will contribute to the

Box 5.2. **Bridging the information gap: The need for water information systems and performance measurement**

Information systems and databases are key mechanisms for sharing water-policy needs in different areas, and measuring the performance of water policies. Most countries have engaged efforts to improve hydrological data (knowledge of the connections between groundwater and surface water, environmental flows in the context of climate change, etc.). But there is still a need to collect further economic, financial and institutional information in the water sector.

In Australia for instance, under the Water Act 2007, water accounting and reporting functions are conferred on the Bureau of Meteorology, which compiles and maintains water accounts; issues national water information standards; holds, manages, interprets and disseminates water information; and provides regular reports on the status of water resources and patterns of water-resource usage.

Country, region, etc.	Existing database or water information system
Worldwide	AQUASTAT, global information system on water and agriculture.
European Union	Water Information System Europe.
Euro-Mediterranean region	Euro-Mediterranean Information System on know-how in the water sector (EMWIS).
Australia	Australian Water Resources Information System (AWRIS).
Austria	Water Information System Austria (WISA).
France	National System of Water Information (web portal, online metadata catalogue).
Japan	Water Information Portal Site.
Korea	Rural and Agricultural Water Resource Information System.
Mexico	National Water Information System.
New Zealand	Water Monitoring and Reporting Programme.
Spain	Spanish Integrated Water Information System (SIA).
Turkey	Water Database Project.

Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Publishing, Paris, forthcoming.

debate on "good governance" during the 6th World Water Forum (March 2012, Marseille), which is expected to provide "innovative institutional solutions" and action plans to make water reform happen while involving local actors, including citizens and operators.

In the absence of the optimum, the response to water-governance challenges relies on place-based approaches that take into account territorial specificities and local concerns. But a common vision strategy for all levels of government, as developed by the 2030 Water Agenda recently adopted by Mexico, is still required to overcome fragmentation; design shared objectives, including with civil society; craft governance structures; and create institutional incentives to think out of the "water box". In this regard, effective public governance and regional policy supporting the contribution of local authorities to water-policy design and implementation are key assets.

Box 5.3. **River basin agencies in response to the administrative gap**

In recent years, under the EU Water Framework Directive (WFD), river basin management has been proposed as one element for addressing the administrative gap, while ensuring a holistic and hydrological approach to harmonise water policy across sub-national actors and between levels of government. The basin perspective helps integrate physical, environmental, social and economic influences on water resource, as effective water policy implementation raises the question of the "relevant scale" for service delivery and resources management. In all OECD countries where they exist, river basin organisations are significant actors in the co-ordination of water policy across levels of government. The "maturity" of river basin organisations also varies across OECD countries, especially for co-ordinating competing uses, which requires equitable approaches to resolving conflicts in the political and legal arenas.

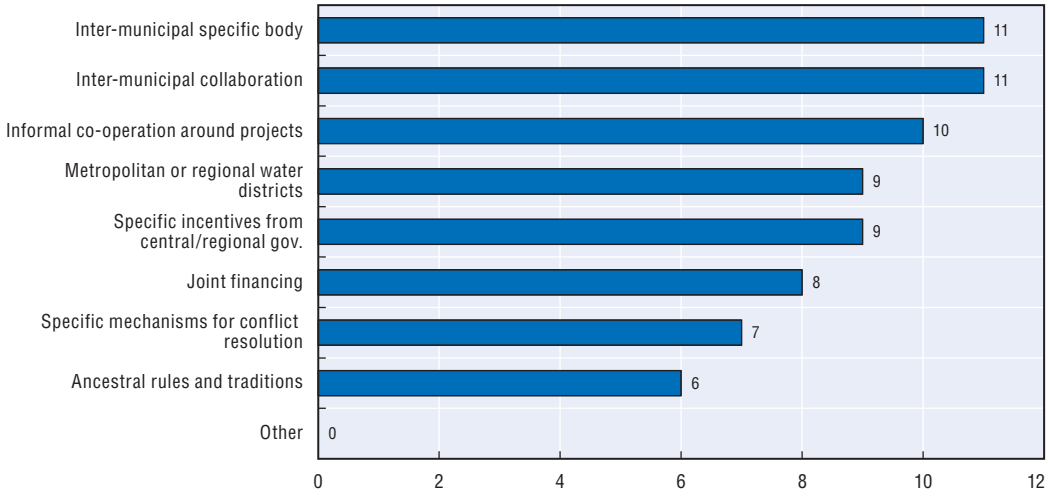
Missions, constituencies and financing modalities of river basin organisations also vary from one country to another. While all river basin authorities in countries surveyed have functions related to planning, data collection, harmonisation of water polices and monitoring, their role in the allocation of water uses, prevention of pollution, co-ordination, financing and regulation is not systematic. In France, water agencies are spread throughout the territory while in other countries (Australia) they are concentrated in a specific area. In most cases they are accountable to central government ministries and public agencies, and/or local and regional authorities and financed through autonomous budget and grants from the central government, which explains their high degree of dependence to the central government. In some cases sub-national governments also contribute to finance basin authorities. This is the case in Australia, Italy, Mexico, the Netherlands, Spain and the United States.

In principle, starting January 2010 all EU countries should have moved from the "preparation" stage to the "implementation" phase of the Water Framework Directive. However, the European Commission has noticed serious delays in the delivery of river basin management plans (RBMP). In several EU countries, consultation processes are still ongoing, while in others (Portugal, Malta and Greece), they have not even started. To date, 91 hydrographical districts have published their plans, out of 170, which represents only 14 countries delivering their RBMP on time. International district management plans have been published for the Danube, Rhine, Elbe, Ems, Meuse and Escaut rivers.

Yet, improvements are still needed in the international district management plans, which too often consist in a compilation of national "pieces", each member states being, *in fine*, accountable to the European Commission. Better governance is a crucial challenge in to transpose the WFD into national law. Interestingly, countries "late" in the WFD implementation process are not newcomers in the EU but either states facing challenging political resistances (rivalries between territories/levels of government) or countries that have engaged significant parallel reforms in the water sector, delaying the enforcement of EU requirements (*e.g.* Portugal). Capacity gaps are thus not the only explanatory factors. A major obstacle to the implementation of the WFD lies in the additional financial cost estimated up to 30% in some water districts, which may require an equivalent increase of water tariffs unless other sources of financing can be mobilised.

Figure 5.13. **Tools to manage the interface between sub-national actors in water policy, 2010**

Number of countries



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Conclusion

Tackling the challenges of climate change and environmental degradation will, to be sure, require policy responses at different scales – international, national, regional and local. There is no denying the importance of international co-operation or the need for economy-wide policies to promote greener growth. Nevertheless, to overlook the wide range of opportunities confronting sub-national policy makers, at both regional and local levels, would be a mistake. Urban policies clearly have a role to play in curbing greenhouse gas emissions and other environmental "bads" in specific ways that national policy makers may support but often cannot realise directly. Many of these are aimed at simply reducing the emissions associated with consumption in urban areas, but that is far from the whole story: there are also a wide range of growth opportunities associated with greener urban policies. For rural areas, the rapid growth of renewable energy sources offers considerable opportunities, but, as is clear from the foregoing analysis, a large dose of realism is required when approaching such projects. Even when renewables projects move forward, it is not always a simple matter to ensure that the affected communities reap the economic benefits.

In both urban and rural settings, making the most of opportunities for greener growth requires an understanding of the characteristics of particular places – hence the limits of a space-blind, top-down approach. In both settings, too, issues of multi-level governance are at the heart of the search for environmentally sustainable models of growth. "Disconnects" between government levels can undermine policy effectiveness or even thwart implementation altogether. This gives recent OECD work on water governance a broader relevance. Many of the issues addressed in the final part of this chapter are not unique to water alone, and the principles derived from this work can provide a useful starting point for addressing multi-level governance issues in respect of other environmentally sensitive goods.

Notes

1. This can be mainly explained by the lower level of economic development and consumption per capita.
2. This modelling exercise developed by Fabio Grazi and Henri Waisman (CIRED) has been carried out by employing the spatialised version of the IMACLIM-R CGE model (Crassous *et al.*, 2006). IMACLIM-R allows simulating the interactions between changes in energy consumption, carbon emissions and economic growth, given a set of policies and other exogenous factors. In this model, carbon emissions are reduced relative to the baseline following the implementation of densification policies and congestion charges, a form of road toll of the type already implemented in some metropolitan regions (London and Stockholm among others). While densification and congestion charges are not the only effective tools to reduce energy demand and carbon emissions, they are important as they do not have a detrimental effect on long-term economic growth, when innovation is taken into account.
3. The employment multiplier associated with a particular regional economic stimulus is designed to yield an estimate of the total employment attributable to the stimulus per job or man-year of employment directly created.
4. There is a possibility that different sources of renewable energy are developed in sequence and in this case the impact on the labour market is larger and does not decline immediately. Extremadura (Spain), for example, began with the development of photovoltaic power between 2007 and 2009 and then started developing high-temperature thermo-solar, maintaining the high momentum for the construction and manufacturing industries.
5. This dynamic, for instance, may be observed in Extremadura, Spain, where local manufacturing firms producing metallic structures for electricity transmission lines diversified part of their production in structures for photovoltaic and concentrating solar thermal, as these sectors are booming in the region. These firms are located in rural areas, and are relatively labour-intensive. Their presence in Extremadura depends on the dense power lines that characterise the region and is due to the presence of a nuclear plant and a large hydroelectric plant.
6. In Puglia, Italy, both the legacy of a large industrial pole in the steel industry and the regional specialisation in electricity production (the region is home to the largest coal power plant in Europe) are supporting renewable energy deployment.

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PART III

Policy Forum: Place-Based or Spatially Blind Development Models?

OECD Regional Outlook 2011
Building Resilient Regions for Stronger Economies

PART III

Chapter 6

Why Location Matters: The Terms of a Debate

by
John Fernandez*

This introduction to the OECD Regional Outlook Policy Forum presents a brief overview of the long-running debate over the "New Economic Geography" and its relevance for policy, before reflecting on the significance of this debate for the wider development agenda that is central to this Outlook. The introduction then examines some recent changes in US policy in the context of this discussion. This is followed by brief introductions of the contributions to the debate that follows.

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The OECD's Territorial Development Policy Committee, which I have the privilege of chairing, is arguably the only international governmental forum focusing on debating policy and governance issues that drive regional development and the contribution of regions to a country's national economic growth and international competitive position. Created in the 1990s, this committee, comprised of delegates from the national governments of OECD member countries, was the first forum to articulate a shift in paradigm operating within national governments at the beginning of the last decade in their approach to regional development and regional disparities within their borders. From the traditional sector-specific approach focusing on short-term subsidies to support employment in lagging regions, most member countries have over the last decade begun to address regional economic performance by taking a more holistic, multi-sector approach that seeks to identify and harness local strengths and assets as a means to encourage growth and development in their regions. In other words, governments have begun to focus more on the local and regional "ecosystems" that can generate growth, which require a multi-sector, whole-of-government approach, along with networked, multi-level governance arrangements to align objectives across different levels of government.

This paradigm shift was not achieved overnight; indeed it is still ongoing. Yet a central tool in affecting this shift has been debate and the sharing of policy and governance best practices among member countries on issues that are central to understanding the dynamics of regional economic development. It is in this spirit, then, that I am pleased to introduce this first policy forum on the issue of which of a place-based or a place-blind development model works best to achieve growth results in regions. This forum is meant to allow for the full and frank exchange of views so crucial to advancing our understanding of regional development dynamics. What better subject to cover first than that which defines the paradigm shift itself: do the specific attributes of "place" really matter? Are they determinants in the policy design and implementation process aimed at generating growth in regions?

Why location matters: The terms of a debate

By assuming that labour and capital are perfectly mobile within countries and such mobility is without cost, standard economic theory basically concludes that the choices made by individuals and firms can be explained without reference to location factors. This theory assumes that decisions by people and firms to move to or from specific places in the real world are mainly driven by considerations of efficiency, which stem from perfectly competitive markets in which consumers have the widest access to the broadest array of desired goods and services using the least amount of resources.

Any breakdown in this state of affairs is caused by market failure, due to factor immobility, monopoly, barriers to entry, externalities or imperfect information. Therefore, only a market failure provides the rationale for a policy response tailored to the specific circumstances of a given place in economies where markets play a role in the allocation of

resources. This response would attempt to deliver goods and services that the market is unable to provide in that place, and the response would be deemed to be efficient if its benefits outweigh its costs (Kilkenny and Kraybill, 2003).

In this context, the new economic geography (NEG) articulates a framework in which spatial structure interacts with industrial structure to determine the location of firms and workers. A central question addressed by this framework is where firms and workers locate and why they choose certain places over certain others (Kilkenny and Kraybill, 2003). The main idea behind the NEG is to explain why consumers and firms tend to agglomerate in geographic areas where other firms are already located. Krugman (1991) articulated its theoretical foundations by showing how regions that are similar or even identical in underlying structure can over time evolve into "core" or "peripheral" economies. The more producers choose to locate in one region, the more workers move there and the wider the variety of products produced. This generates a number of positive spill-overs. Positive spatial externalities (linking individual to group outcomes, for instance in education and training), knowledge spill-overs (their extent being a function of density and proximity between workers) and national efficiency gains (by fostering conditions to attract capital to regions in which labour is less mobile) are all factors that these theories highlight as key to understanding growth (Kilkenny and Kraybill, 2003).

This approach highlights the benefits of agglomeration for efficiency and growth, as well as the risks of regional under-development traps. Thus, location matters. But this does not necessarily create a rationale for place-based policies. In the early stages of the debate about regional policy, the arguments mainly focused on the need to compensate lagging regions for positive agglomeration effects that benefit the country as a whole but somehow pass these regions by. By now, the overwhelming evidence is that these strategies are actually not sustainable. They create dependency relationships – and over time, the political will on the part of rich regions to pay for lagging regions also tends to decline. This drove the paradigm shift highlighted above toward a focus on local competitiveness and development strategies. By definition, these policies need to be place-based; otherwise they cannot address the development asymmetries generated by agglomeration effects. Yet, an important school of thought maintains that "place-based" policies represent a misguided attempt to "prop up" lagging regions. Such efforts are seen as distortionary and counter-productive over the long term.

This debate was re-ignited with the publication in 2009 of the *World Bank's World Development Report: Reshaping Economic Geography*. Its leading author, Indermit Gill, currently the World Bank's Chief Economist for Europe and the Central Asia Region, published in October 2010 an article in *VoxEU.org* arguing that placed-based policies, while well meaning, were fundamentally "misguided". "Prosperity does not come to every place at once, and to some places it does not come at all", Mr. Gill declared. He argued that economic growth is by definition unbalanced and that to try to spread it out – too much, too far, or too soon – is to discourage it. He advocated that policy makers should focus on economic integration between high-growth and lagging regions to reduce disparities.

The following month, also in *VoxEU.org*, Fabrizio Barca, former Chair of the OECD's Territorial Development Policy Committee and special advisor to the EU Commissioner of Regional Policy, and Philip McCann of the University of Groningen responded by stating that Mr. Gill had "misrepresented the place-based approach, reflecting a poor understanding of the determinants of under-development and the relationships between institutions and

economic geography". They argued that "a place-based approach is exactly the appropriate framework to address" problems of, for example, slums, *favelas* and *barrios* in large metropolises across the planet: "few people who live there are likely to be cheerleaders for a space-blind, sectoral-type thinking". Also in *VoxEU.org*, Enrique Garcilazo, Joaquim Oliveira Martins and William Tompson of the OECD Secretariat, argued that if the overarching policy objective is growth-enhancement, not inter-regional compensation, then to the extent that this objective is achieved, the policies aimed at achieving it are in fact "people-centred", whether they are spatially blind or place-based. Thus, they argued, the dichotomy between "place-based" and "people-centred" is simply false.

To summarise the terms of the debate, economists squared off against economic geographers, arguing that institutions and framework policies matter more for development than place-specific factor endowments. The geographers argue that while these institutions are of capital importance for economic development, they fail to explain why some regions with comparable formal institutional arrangements develop at radically different rates. Geographers contend that they are making a substantial contribution in areas where economists have struggled: in understanding how place-based interactions between formal and informal institutions can provide a much more textured analysis of what shapes economic development (Rodríguez-Pose, 2010).

The useful debate touched off by Mr. Gill is about which of a place-based or a space-blind, sector- and framework-driven economic development model is best suited to address regional growth challenges. Is this an either/or proposition? Is it a false debate? This forum seeks to push this debate further in view of its importance to policy makers across the OECD, particularly as countries emerge from the Great Recession and face the challenge of identifying strategies that can generate growth in a tight fiscal environment. But the implications of the debate go well beyond strict economic efficiency issues.

Place-based policies and wider development considerations

In addition to the above considerations about growth and efficiency, climate change and environmental degradation across the world have generated the need to overcome a perceived trade-off between growth and environmental sustainability: the two can, and must, be mutually reinforcing policy goals. The examples of regional innovation "ecosystems" and green growth policy approaches presented in this Outlook attest to this increasingly mainstream focus of regional and national policy frameworks. Indeed the European Union itself focuses on building a "smart, inclusive and sustainable" Europe, the OECD's mission statement refers to "stronger, cleaner, fairer" economic outcomes and the Obama Administration, through the Economic Development Administration, is focused on supporting a 21st century economy fostering business and job growth.

An issue, therefore, is how to design a national or regional development policy framework or model that simultaneously addresses objectives related to efficiency, equity and the environment. Can this be achieved in a place-blind manner? Can framework, sector-specific policies applied a-spatially achieve these three objectives in a coherent, integrated, holistic fashion? This debate has significant governance implications as well: at issue is how best to organise national and regional government institutions to build this framework or model which, by definition, is "whole-of-government". Can a development model that seeks to achieve these three outcomes simultaneously be designed and

implemented optimally by centralised, sector-based, "siloed" institutional arrangements? Once decentralisation occurs, can central governments manage a country's development to achieve these objectives simultaneously by using an a-spatial development model?

National and regional politicians grapple with the effects of this debate daily. Politicians in disadvantaged regions are confronted with high unemployment and lagging growth. Is the message to the unemployed voters in these politicians' region who want a job that they are free to move and seek employment in a high-growth area? Or is it that an approach will be designed and implemented that will foster the conditions for these unemployed voters to have the choice of working in their region or moving elsewhere for equally gainful employment?

National legislatures contend with regional tensions on a daily basis on just about every policy issue of significance. Across the OECD, as national governments engaged in stimulus spending to help their economies come through the crisis, the debates on managing infrastructure investments equitably across regions within member countries were similar: regional fair-share arguments not only mirrored the urban-rural split (sometimes fuelled by over-representation of rural voters in some legislatures) but the richer-poorer divide in member countries. It was thus not possible to implement significant stimulus programming a-spatially. Equally important, as this Outlook illustrates, the most effective approaches to implementing stimulus spending engaged in place-based policy leveraging to achieve several policy outcomes at once.

Advancing the debate

This debate is important for another reason as well: it highlights the disconnect that sometimes persists between perception and reality regarding where regional development policy ought to "fit" within the policy "toolkit" used by governments. The traditional regional development approach, defined as sector-specific expenditures to prop up inefficient industries in an effort to sustain employment in lagging regions – usually at great expense and with little if any positive long-term impact – was seen as a necessary, politically driven cost to a central government's framework approach to national growth. That, as I mentioned at the beginning, is not what regional development policy is about today. Indeed the paradigm shift mentioned at the start redefines regional development as a multi-sector growth model that seeks to identify and harness local strengths and assets – human, built, geographic, intangible – to maximise a region's development potential and its contribution to aggregate growth.

This shift was most recently illustrated by US President Barack Obama's decision in 2009 to engage in "an interagency process focused on investing in what works by evaluating existing place-based policies and identifying potential reforms and areas for interagency co-ordination". That year, the Obama White House asked heads of departments and agencies across the US administration "to develop proposals … that advance this Administration's policy priorities in the most effective way whether by improving place-based strategies already operating or by adopting such strategies where there is significant potential for impact on a problem(s)". The White House directive made clear that "place-based policies leverage investments by focusing resources in targeted places and drawing on the compounding effect of well co-ordinated action. Effective place-based policies can influence how rural and metropolitan areas develop, how well they function as

places to live, work, operate a business, preserve heritage, and more. Such policies can also streamline otherwise redundant and disconnected programs" (Memorandum for the Heads of Executive Departments and Agencies, The White House, 11 August 2009).

Yet whether in the OECD, academia or indeed in multilateral organisations, this paradigm shift has not translated into a universal or broadly shared understanding or appreciation on the part of policy makers (or academics) engaged in designing and implementing national framework growth policies that the regional development model, far from being some politically driven "cost of doing business" located on the margins of government, is in fact central to optimising the impact of these framework policies across their country's disparate regions, particularly now, as countries emerge from the crisis.

The next few chapters seek to advance this debate by assessing the utility of a place-based model in achieving structural policy outcomes.

In arguing in favour of policies that hasten the integration of lagging regions with leading ones to improve aggregate growth, Mr. Indermit Gill compares and contrasts the Irish, Iberian and Italian approaches to addressing regional disparities over the last 30-odd years. He suggests that the principle underlying the Irish approach is a general one: development policies should distinguish between the geography of economic production and the geography of social welfare. As countries develop, the geography of economic production becomes bumpier, while that of social welfare becomes smoother. Together with national policies, regional development policies should facilitate both these spatial transformations. He argues that the experience of Italy, Spain, and Ireland calls for a shift from fighting the forces of agglomeration, migration and specialisation to facilitating them instead; away from a reliance on targeted subsidies for enterprises and towards improved governance and better connectivity. Indeed, he concludes that in the currently tight fiscal environment emerging from the crisis, as western European countries try to find new drivers of growth and greater efficiency in public spending, they should shift from relying on place-based interventions to a mix of policies that strengthens social services such as education, healthcare and general administration everywhere, combined with selective investments in infrastructure to connect leading and lagging regions.

Paul Cheshire, for his part, also posits that structural policies related to education, training, health and childcare, applied in a way that reaches the most people in need of them regardless of where they live, will have a greater long-term impact on spatial development than what he qualifies as distortionary attempts to fix spatial inequities, particularly in cities. He contends that while policy needs to address such problems seriously, interventions should be based on a more rigorous understanding of their causes. He suggests that to date, the best research shows that these social issues are not caused by where people live or the conditions they live in. The most plausible routes to having a real impact are to divert differential resources to providing skills, education, health and childcare to the people who live in the most distressed neighbourhoods, but also to all similar people regardless of where they live. At the end of the day, he argues, it is the welfare of people, not neighbourhoods, that is important.

In arguing that "place" matters, Junghun Kim focuses on the effects of agglomeration, distinguishing certain non-market effects – the politics of primary- or capital-city favouritism by many central governments – from market effects (on productivity, transportation costs, etc.). He suggests that agglomeration is not only an economic phenomenon but a political and social one as well. He therefore argues that it is important

to distinguish between the non-market effects and market effects of agglomeration, and between developed and developing countries. Mr. Kim suggests that regional policy responses to address agglomeration effects will differ between developing and developed countries, and that these policy and fiscal responses have to reflect the full range of market and non-market causes of agglomeration, which by definition will differ from country to country and from metropolitan region to metropolitan region.

Phillip McCann and Andrés Rodríguez-Pose argue that place-neutral policies typically end up being capital-city promotion policies, ostensibly because of agglomeration effects, but to a great extent in reality because of the national rent-capturing influence of capital-city elites in all areas of public life. They argue that as such, place-blind policies are neither space-neutral nor devoid of rent-seeking. They suggest that many core urban centres will grow without the need for significant policy interventions, thereby raising the question as to whether development objectives should be shifted from promoting efficiency in the core to enhancing the potential for growth and development in every territory. While avowedly place-neutral approaches (which may be spatially blind in design but are not spatially neutral in impact) emphasise efficiency in the core, place-based approaches focus on issues of adaptation and transformation to changing conditions in all regions. Phillip McCann and Andrés Rodríguez-Pose posit that, from a place-based perspective, the objective is to harness untapped potential in all regions in a co-ordinated and systematic way. They argue that it is the place-based approach that can achieve this because only such an approach takes into consideration the variety of local knowledge, institutional capabilities and competences in different geographical locations which may affect the potential returns of local policy interventions.

The OECD Secretariat suggests that the debate is actually a red herring, suggesting that "place-based" *versus* "people-centred" is not an either/or proposition. To the contrary, they argue that regional policy makers, while concerned with infrastructure and place-based public investment, as they must be, are equally concerned with human capital development, innovation, competition, labour – and product-market regulation, stimulating entrepreneurship and so on – in short, with all the major aspects of good structural policy. They argue that in countries severely constrained by macroeconomic conditions, as is currently the case for some EU members, regional policy could actually be one of the few remaining levers to promote aggregate growth and that policy makers ignore the spatial dimension of development at their peril.

Fabrizio Barca offers, in his concluding remarks, an elegantly presented survey of the alternative approaches to development by examining the intersections and divergences between them. He argues that a-spatial policies are in fact a combination of perfect-institution, agglomeration-driven and redistributive approaches to development. He posits that nationwide institutional reforms based on an established blueprint constitute one of the pillars of the a-spatial strategy, with a central role played by public investment in agglomerations – driven by "private development interests" – which might have to be followed by incentives and subsidies both to lagging regions (to attract business) and to distressed areas within agglomerations (to limit social disruption). Mr. Barca then points out that only one of the elements of this strategy is truly space-blind. He concludes that the place-based approach is the "new paradigm" of regional policy, as opposed to the "old paradigm" – the redistributive approach in its compassionate version. It is this new paradigm, he argues, that the OECD is promoting by re-launching and developing some ideas originating in the 1950s. He suggests that it is the approach to which several

countries including the United States are increasingly looking as a driver for growth – that it is the approach that could rescue the European Union's Cohesion Policy from ineffectiveness and decline should the reform announced by the *European Commission's 5th Cohesion Report* indeed be carried out.

We now turn to the contributors themselves for their take on the debate.

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OECD Regional Outlook 2011
Building Resilient Regions for Stronger Economies

PART III

Chapter 7

Improving Regional Development Policies

by
Indermit Gill*

This chapter begins with an essentially sceptical critique of the case for "place-based" policies, presenting "a rule of thumb for calibrating regional development policies" that specifies those circumstances in which a place-based approach might make sense. It then compares the Irish, Iberian and Italian approaches to regional policy over the last few decades, concluding that there is a strong association between growth and agglomeration and arguing that regional policies should facilitate agglomeration, migration and specialisation rather than resisting them. The chapter then looks at the implications of this view for public policy in the current tight fiscal environment, with particular emphasis on social policy and connectivity.

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As the global crisis abates, regional development policy is again coming to the forefront of debates in the European Union and in the OECD. But this time, these policies are being debated under different economic conditions than just three years ago. OECD economies now face weak growth prospects, with weakened fiscal balances. In 2010, all but three of the OECD's countries had higher general government debt than they did in 2007. In 2011, almost every OECD country is expected to run a fiscal deficit. Regional development efforts will have to contend with more pressing national growth imperatives, and there will be more pressure to be more frugal with national fiscal resources.

A polarised policy debate

During the economic crisis, three major reports addressed the matter of regional development policies. They should be re-examined, keeping these objectives and constraints in mind. In 2008, the *World Bank's World Development Report 2009: Reshaping Economic Geography* (henceforth WDR) (World Bank, 2008) argued that economic growth will always be spatially unbalanced, and the principal aim of regional development policies should be to integrate lagging regions with those doing better. It emphasised spatially blind "institutions" such as general administration and social services in every case and connective "infrastructure" such as highways, railways, airports, and telecommunication networks in many cases. Targeted "interventions" such as special incentives for enterprises to locate in lagging regions, it argued, should be used sparingly, mainly where countries had internal divisions that weakened the market forces of agglomeration, migration, and specialisation. It proposed how policy makers could calibrate the mix of policies to instruments to suit the circumstances of the country (Table 7.1).

Table 7.1. **A rule of thumb for calibrating regional development policies**

Complexity of challenge	Place type	Policy priorities for economic integration		
		Institutions	Infrastructure	Interventions
		Spatially blind	Spatially connective	Spatially targeted
Low	Nations with sparse lagging regions	•		
Medium	Nations with densely populated lagging regions	•	•	
High	Nations with densely populated lagging regions and domestic divisions	•	•	•

Source: World Bank (2008), *World Development Report 2009: Reshaping Economic Geography*, World Bank, *www.worldbank.org/wdr2009*.

In 2009, two reports were published that differed in their policy conclusions from those of the WDR. A report authored by Fabrizio Barca for the European Commission made the case for "tackling persistent underutilisation of potential and reducing persistent social exclusion in specific places through external interventions…". Soon afterwards, an OECD report argued that persistent disparities between regions imply unused growth potential,

reckoning that since "per capita GDP in the top-ranked region of a[n OECD] country is at least double that of the lowest-ranked region", it is better on both efficiency and equity grounds for policies to target the lagging regions for growth-enhancing policies.

As is often the case with matters that span both efficiency and equity concerns, the debate has become polarised. One way to characterise the debate is that it is between "place-based" and "people-centred" approaches to regional development. But it is difficult to distinguish between the two. This is how the Barca report defines place-based regional development:

> … a long-term development strategy whose objective is to reduce persistent inefficiency (underutilisation of the full potential) and inequality (share of people below a given standard of well-being and/or extent of interpersonal disparities) in specific places, through the production of bundles of integrated, place-tailored public goods and services, designed and implemented by eliciting and aggregating local preferences and knowledge through participatory political institutions, and by establishing linkages with other places; and promoted from outside the place by a system of multi-level governance where grants subject to conditionalities on both objectives and institutions are transferred from higher to lower levels of government (Barca, 2009).

There is not much here that anyone can disagree with. Nobody would propose the opposite, *viz.*, that inefficiency should not be reduced over the long term, or spatial inequities in the share of people below some poverty line should not be reduced, or public services should not be designed using local preferences and knowledge, or that politics should not be participatory, or that linkages with other places should not be strengthened, or that there should not be multi-level governance with disciplining of how intergovernmental transfers are used. This definition can hardly be the basis of a serious debate.

The OECD also does not specify what a place-based strategy is, but argues that such an approach is needed to generate "synchronised growth" in all places all at once. The Secretary-General of the OECD, in a recent speech that was probably informed by the OECD (2009) report, said:

> Some argue that location doesn't matter and that national policies are sufficient. We reject this view at the OECD and support a place-based approach. Yes, location matters. Whether resources are natural, human or intangible (such as culture), they are located in a geographic space. Once the approach to national growth becomes place-specific, sectoral policies need to be adjusted to the specific local economic, social and environmental conditions…
>
> More fundamentally, this place-based approach requires advanced and effective vertical and horizontal governance mechanisms. It implies a deep and co-ordinated engagement of regional and local governments in achieving national short and long-term development outcomes. It also entails nurturing specific institutional arrangements to sustain the dialogue between the public and private sectors, academia and training institutions and community-based non-governmental organisations (Gurría, 2011).

It is not clear why anyone would suggest (or has suggested) that location does not matter, or that resources are not "located in a geographic space". Why would other "non-place-based" approaches not need effective governance mechanisms or co-ordination between national, regional and local authorities? Which approach would not benefit from

arrangements that promote dialogue between government, businesses and new economic geography (NEG)? Again, this characterisation of place-based policies cannot be the basis of a serious debate.

For these reasons, this note tries a different approach. It first outlines what economic growth looks like in most countries in the world. It oversimplifies things a bit, because it turns out that these patterns are not the same in the poorest and richest countries. But this simplification is done to illustrate a point: that it is costly to try to put in place "synchronised policies" to make every place grow at once; far better to help lagging and leading regions become more integrated with each other, and with international markets. The note then outlines a simple set of rules – gleaned from theory and experience – to facilitate this integration in circumstances that vary from the straightforward to the complicated. Finally, it describes how the approach to regional development has evolved over the last several decades. Again, it simplifies things, perhaps overly so, by using the "Italian", "Iberian" and "Irish" approaches to regional development policies as illustrations. This is done both to show how regional development policies have become more effective over time by recognising that the forces of agglomeration, migration and specialisation can be used by policy makers to integrate nations and facilitate economic development, and whether different national conditions require more or fewer instruments of integration.

Economic growth will be unbalanced

Prosperity does not come to every place at once, and to some places it does not come at all. This is difficult for caring people to accept, because it is more natural to think that if a place is not prospering, the policy remedies must be incorrect or inadequate. The belief is that a strong enough push to improve governance, a big enough investment in infrastructure, and generous enough incentives to enterprises to move to lagging regions would make such places as prosperous as the others. At unification, many leading politicians in Germany seemed to think so. Despite a vast flow of funds to Eastern Germany – estimated at more than EUR 1.3 trillion – privately produced GDP per capita is still only 65% of Western Germany's. And a lot of this catch-up is not because eastern GDP went up, but because more than 1.7 million east Germans left for a better life in the west. Cities became cleaner and public services better, but even a Herculean push did not make the distribution of economic activity smooth.

Today, with a severe fiscal crunch facing policy makers in much of the OECD, they must make spending decisions based on clear-headed assessments of how growth and development take place. And any realistic analysis shows that economic activity is not evenly spread out – not in large middle-income countries such as Mexico, nor in mid-sized but more developed countries such as Korea and Poland, nor even in small advanced economies such as Belgium and Denmark. This poses an apparent dilemma. Should policy makers abandon lagging regions, at least until a country accumulates so much wealth that it can essentially waste some of it on incentives for economic activity in these places?

Integrate, integrate, integrate

The WDR proposes a better solution. It urges policy makers to recognise that economic growth will be spatially unbalanced, and to try to spread out economic activity – too much, too far, or too soon – is to discourage it. It advises that they should instead look at the interactions between leading places and those that are lagging. When seen this way,

migration is not seen as a failure of policies but as a measure of the desire of people to improve their lives and those of their children. Agglomeration of businesses is not seen as a visual manifestation of spatial inequities, but instead as an opportunity to design fiscal transfers to share the fruits of economic concentration in some places by spreading social services to places not as lucky or plucky. Spatial specialisation is the rule, and this means that some regions will grow faster than others, and yet others will not experience growth at all. The best way to help a lagging region is to reduce its economic distance to leading places; that is, through economic integration.

The notion of economic integration should be central to the debate on regional development, but the discussions are often narrowly focused on places that are not doing well. Perhaps this is what underlies the use of the term "place-based approach". The WDR tries to reframe this debate in a way that better conforms to the reality of development. The reality is that it is the interaction between leading and lagging places that is key to economic development. Spatially targeted interventions are just a small part of what governments can do to help places that are not doing well. Besides place-based interventions, governments have more potent instruments for integration: they can build the institutions that unify all places, and put in place infrastructure that connects some places to others. Policy discussions should include all the instruments of integration – institutions that unify, infrastructure that connects, and interventions that target. Experience and analysis can help to tailor the use of these policy instruments to address integration challenges that range from the relatively straightforward to the most complicated (Table 7.2).

Table 7.2. **Calibrating regional development policies**

	Country type		
	Sparsely populated lagging regions	Densely populated lagging regions in united countries	Densely populated lagging regions in divided countries
What policies should facilitate	• Labour and capital mobility.	• Labour and capital mobility. • Market integration for goods and services.	• Labour and capital mobility. • Market integration for goods and services. • Selected economic activities in lagging regions.
Policy priorities			
Spatially blind "institutions"	• Fluid land and labour markets, security, education and health, safe water and sanitation.	• Fluid land and labour markets, security, education and health, safe water and sanitation.	• Fluid land and labour markets, security, education and health, safe water and sanitation.
Spatially connective "infrastructure"		• Interregional transport infrastructure. • Information and communication services. • Local roads.	• Interregional transport infrastructure. • Information and communication services. • Local roads.
Spatially targeted "incentives"			• Incentives to agriculture and agro-based industry. • Irrigation systems. • Workforce training.

Source: World Bank (2008), *World Development Report 2009: Reshaping Economic Geography*, World Bank, *www.worldbank.org/wdr2009*.

Even for those who have recognised the futility of providing economic incentives for staying and striving in lagging regions – such as the discouraged regional development

specialists who worked for decades on Italy's *Mezzogiorno* – the lagging regions in the south – the temptation is to think of highways, railroads, and airports as the main instrument of integration. The WDR emphasises that the most potent instruments for integration are spatially blind improvements in institutions; put more simply, the provision of essential services such as education, health, and public security.

Rodríguez-Pose (2010) provides a sensible critique of an overemphasis on spatially blind policies for integrating lagging areas with the broader economy, writing that the Barca and OECD "reports posit that even the best spatially blind development strategy can be undermined by poor institutional environments". In this context, the main points made in the 2009 WDR are worth repeating:

- Policy makers should consider all the instruments of integration when designing a regional development strategy – universal institutions, connective infrastructure, and targeted interventions. But they must start by improving the basic institutions – essential social services provided to all at levels of quality that the country can afford, and sensible regulation of markets. In some cases, such as the Italian *Mezzogiorno*, doing this may be difficult. But there is really no choice. And the experience of other countries shows that it can be done.
- The next instrument is infrastructure – well-placed roads and railways, and balanced regulation or provision of transport services – to improve market access.
- The final instruments, to be used only in extraordinary circumstances but always in conjunction with institutions and infrastructure, are special incentives to attract business to lagging regions.

Logic and experience both show that place-based incentives only succeed when they are accompanied by efforts to strengthen institutions and improve infrastructure.

The Italian, Iberian and Irish approaches

The experience in Europe is especially illustrative. Table 7.3 shows three stages of regional development policies in Europe. They can be called – somewhat exaggeratedly but with the benefit of helping readers remember the main points – the "Italian", "Iberian" and "Irish" models. The nicknames are chosen because they reflect policies in Italy between 1955 and 1990, in Spain and Portugal during the 1980s and 1990s, and in Ireland during the 1980s, 1990s and early 2000s. The experience of these countries is the story of progress in understanding what works best to help people in lagging regions.

Table 7.3. **Three approaches to regional development in Europe**

	"Italian" model	"Iberian" model	"Irish" model
Rationale	Bring jobs to people.	Brings jobs to people and enable them to access product markets.	Prepare people to get jobs wherever they are.
Objective	Bring economic activity from leading to lagging regions.	Facilitate access of producers in lagging regions to markets in leading regions.	Integrate lagging and leading regions.
Instruments	Emphasis on spatially targeted interventions.	Emphasis on interventions and connective infrastructure.	Emphasis on institutions and connective infrastructure.

Although Structural and Cohesion Funds seem to have contributed to growth of GDP per capita in these countries, assessing their impact on regional differences is not straightforward.* The shift in regional policies illustrates how countries have been searching for successful approaches towards regional development. In Italy, after years of spatially targeted incentives to develop enterprises in the lagging south, the approach gradually changed to include an emphasis on institutions (social service provision) and better infrastructure. In Spain, initial regional development policies included a combination of special incentives and improved infrastructure, with a later shift to improvements in education and training. In Ireland, the policy mix emphasised institutions – especially business-friendly regulations and national efforts to deliver essential social services such as education and healthcare – and connective infrastructure, not spatially targeted incentives for businesses.

Italian failure

Italy's experience in trying to develop the *Mezzogiorno* shows the futility of relying on targeted incentives to integrate lagging regions into the national economy. These efforts correspond to the policy from 1955 to 1993 that provided companies with subsidies to tilt their investment profiles to the south. Due to weak institutions and inefficiencies, the support for the south did not bring measurable economic benefits (Table 7.4). Indeed, the fall in unemployment between 1950 and 1970 was achieved mainly due to emigration from the south to Northern Italy.

Table 7.4. **Economic development of Italy's *Mezzogiorno***

	1951-60	1961-70	1971-80	1981-90	1990
The south's share of the national total or level (%)					
Population	37.2	36.0	35.1	36.1	36.6
GDP per capita	54.5	56.6	58.6	58.2	56.7
Fixed investment	26.0	29.0	31.2	29.0	26.9
Unemployment rate (%)					
South	9.1	6.4	9.6	16.3	19.7
Center-North	6.8	4.5	5.2	7.6	6.5

Source: Faini, R., C. Giannini and G. Galli (1993), "Finance and Development: The case of Southern Italy", in Giannini, Alberto (ed.), "Finance and Development: Issues and Experience", Cambridge University Press.

StatLink http://dx.doi.org/10.1787/888932521695

Italy changed its approach in the early 1990s. Targeted subsidies for enterprises were de-emphasised and administrative reforms were made a priority. Decades of misdirected money had exacerbated divisions between the north and the south without reducing the gaps in per capita incomes.

Iberian experiments

The cohesion countries obviously learned from Italy's failures. In Portugal and Spain, regional development efforts focused on infrastructure, though they also provided

* From a quantitative perspective, different models attribute various growth contributions of structural and cohesion funds: 3.0-9.3% of additional GDP between 1994-99 for Ireland, 2.3-9.2% for Portugal, 1.2-4.2% for Spain and 2.2-5.4% for Greece. The models underlying these estimates are HERMIN, QUEST and Beutel.

incentives for companies to locate in lagging regions. Between 1994 and 1999 productive infrastructures accounted for half of the available public financing, while subsidies to private activities made up nearly a quarter. Although EU funds contributed to convergence in wealth and employment of the poorest regions, they did not necessarily make the inequalities between the regions smaller. Gomis-Porqueras and Garcilazo (2003) found that despite the flow of structural funds, wage inequalities in Portugal and Spain increased between 1989 and 1999.

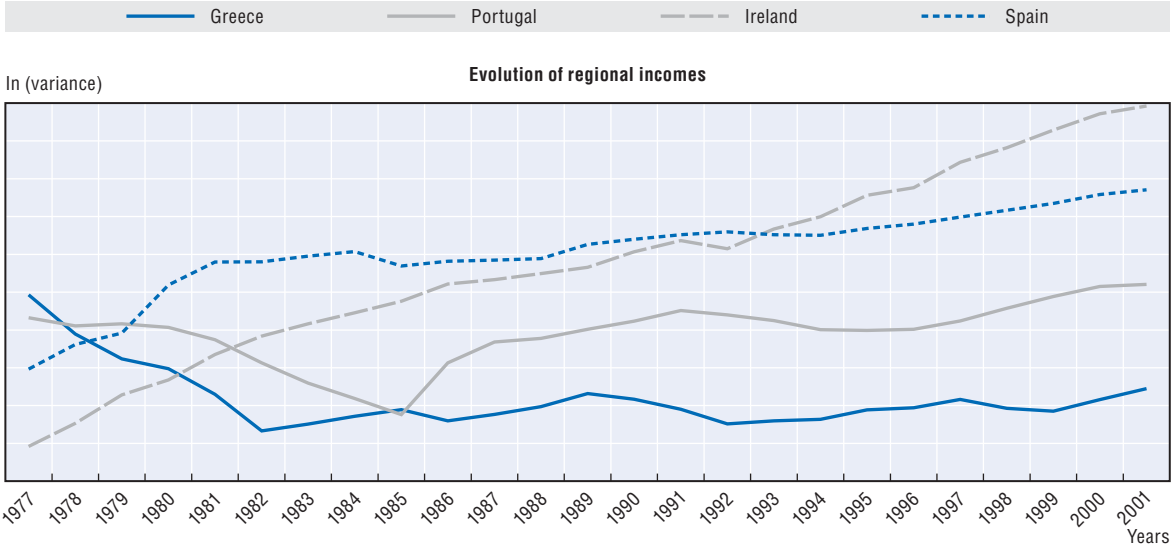
Pérez *et al.* (2009) find that allocating resources to lagging regions does not result in commensurate advancements. Between 1995 and 1999, the richest regions in Spain were actually able to capture some of the returns to investments in poorer areas. Montolio and Solé-Ollé (2009) indicate that the efficiency of public investment actually has a lot to do with private sector characteristics: between 1984 and 1994 in Spain, public investment in infrastructure was more effective in regions with greater private activity.

Irish success

The experience of Ireland may be the most educational. Between 1977 and 2007, Ireland's GDP per capita grew from less than 75% of the EU average to about 125%. Some of this progress – especially after 2002 – was almost certainly the result of a housing bubble. But much of the progress was built on solid foundations, which included sound regional development policies that made the most of EU support.

Compared with the other cohesion countries – Greece, Portugal, and Spain – spatial concentration in Ireland increased much more (Figure 7.1). Its per capita income grew much faster too. In 1977 Greece, Ireland, and Spain had per capita incomes of about USD 9 000; Portugal's was USD 6 000. By 2002 Portugal had an income of USD 11 000, and Greece and Spain close to USD 15 000. Ireland's had risen to USD 27 500.

Figure 7.1. **As Ireland converged internationally, domestic concentration increased**



Source: Dall'erba, S. and Hewings G.J.D. (2009), *European Regional Development Policies: The Trade-off between Efficiency-Equity Revisited*, Connections.

StatLink http://dx.doi.org/10.1787/888932520992

Ireland was also more successful in tackling regional unemployment differentials than Spain, Italy or Germany. And it is likely that despite its current problems – which are due mainly to decisions regarding banks – Ireland will keep its place among the 20 richest countries in the world.

What was behind Ireland's success? Among other things, recognising the national benefits of spatial concentration, and co-ordinated efforts to promote domestic integration through a sensible blend of spatially blind public service provision and well-placed investments in infrastructure. Since joining the EU in 1973, Ireland received approximately EUR 17 billion in EU Structural and Cohesion Funds through the end of 2003. In the first two rounds of EU funding, the entire country was classified as an Objective One area. Between 1993 and 2003 Cohesion Funds supported 120 infrastructure projects at the cost of about EUR 2 billion. The choice of projects was based on a national development plan, which focused on investments in economic infrastructure that stimulated national economic growth.

Infrastructure improvements were more selective. These included investments in leading regions and in connecting leading and lagging areas, such as the M50 (Dublin Ring Road), M1 (Dublin-Belfast), and improvements in the N4 (Dublin-Sligo), N7 (Dublin-Limerick), and N11 (Dublin-Rosslare). With its skilled labour force and good logistics, Ireland became a popular destination for American firms and European workers.

The Irish invested aggressively in education and training and general public services in all of Ireland to create a good business climate countrywide. Martin (2003) notes that nearly 45% of EU Structural Funds 1994-99 were invested in human resources – compared with less than 30% for Spain, Portugal and Greece. The USD 2 trillion that Germany spent on integrating the East was also aimed at social transfers and infrastructure rather than investments in human capital.

Bachtler and Yuill (2001) provide an informative account of the shift in regional development approaches from a reliance on incentives for enterprises to an emphasis on improved business environment and soft infrastructure. OECD documents write about a shift to policies that are now aimed at encouraging economic activity in both lagging and leading regions, and to "exploit their unused potential". The paradigm has perhaps to evolve to recognise that it is not the best use of public money to try to spread economic activity to all places at once.

Conclusion: Follow the Irish

Contrasting the Irish approach to regional development with the Spanish or Italian approaches is not straightforward. Ireland is a small country where a single pole of concentration could suffice – indeed would be suitable. Italy is a bigger country, with stubborn differences between north and south that could indeed be termed "divisions", in the terminology of the WDR. East and west Germany had deep socio-political cleavages at unification. Spain faces similar political divisions.

But many economies in the OECD are small, and the principle underlying the Irish approach is a general one: development policies should distinguish between the geography of economic production and the geography of social welfare. As countries develop, the geography of economic production becomes bumpier, while that of social welfare becomes smoother. Together with national policies, regional development policies should facilitate both these spatial transformations.

Despite the characteristics that make Ireland unique, the lessons from its experience with regional development policies are quite broadly applicable. The experience of Italy, Spain, and Ireland calls for a shift from fighting the forces of agglomeration, migration and specialisation to facilitating them instead; away from a reliance on targeted subsidies for enterprises and towards improved governance and better connectivity.

Today, almost all regions in the new member nations in Eastern Europe qualify for EU financial support. They should consider using the funds for international convergence and not – until later stages – for spatially balanced economic growth within their borders. Those aspiring to belong to the European Union – such as Albania, Turkey and countries of the former Yugoslavia – would be well-advised to be even more single-minded in using the funds for international convergence and not spreading economic activity out too soon.

And, as the older member states of Western Europe try to find new drivers of growth and greater efficiency in public spending, they too would do well to shift from relying on place-based interventions to a mix of policies that strengthen social services such as education, healthcare and general administration everywhere, combined with selective investments in infrastructure to connect leading and lagging regions. In a few cases, place-based interventions such as special incentives to firms to locate in lagging regions might be necessary. But these should be used least and last, and only along with efforts to improve basic social services and connective infrastructure.

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PART III

Chapter 8

Places, in Places, but People Everywhere: The Place for Policy

by
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This chapter argues the case for a new balance between policies that target places and those that target specific groups of people, without regard for where they are. While accepting the case for policy interventions to address some spatial inequities, it calls for a much more rigorous understanding of their causes. It suggests that in most cases policies are best applied in a way that reaches those in need regardless of where they live and that attempts to reduce spatial inequities can be highly distortionary, especially when addressing intra- rather than inter-regional disparities.

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Introduction

Given how important cities are in human development, we know remarkably little about them: compare total spending on fathoming particle physics compared to understanding how space in economy works and how cities deliver welfare. Then compare the welfare humankind derives from cities with that derived from particles. As Glaeser (2011) argues, cities are probably the most important innovations ever introduced in terms of human welfare. But as was emphasised in Cheshire (2006), knowing little about how the space economy actually works does not seem to reduce our self-confidence in promulgating policies, and often *dirigiste* policies at that.

Consider two now incontestable facts: agglomeration economies are important and statistically significant; and land and housing markets operate in such a way that they capitalise into land prices a quite staggering range of both tangible and intangible features of location. Now contrast these two facts with conventional wisdoms of policy: regional disparities are serious and a handicap to development and human welfare so policy should reduce them. And urban areas display concentrations of poverty in distressed areas and policy should attempt to deal with this fact by regenerating neighbourhoods and "mixing communities".

OECD (2009) notes that "per capita GDP in the top-ranked region of an OECD country is at least double that of the lowest-ranked region" as if this were sufficient justification for place-based policy interventions. OECD countries officially approve not only of policies to assist "distressed areas" (OECD, 1998) but in many cases have implemented specific policies to construct mixed neighbourhoods as a "solution". Neighbourhood-based regeneration is widely adopted; indeed it formed a central element of the London 2012 Olympic bid.

Even at second glance these two policies seem to be at best inconsistent with these two emerging facts of the spatial economy and how it works; and at worst they attempt to project wishes onto reality perhaps even exacerbating the problems they are designed to address. Like an 18th century public health policy investing in leech farms rather than in research to understand better the causes of disease.

The simplest thought experiment tells us agglomeration economies must be significant. We know that it costs resources to transport goods through space and that living or working in large concentrations costs more than living and working at low densities. Congestion, pollution, water supply and sewage disposal are hardly problems in peasant societies. So cities must contribute some gain to productivity and/or welfare or they would not exist, indeed, thrive. Alfred Marshall had great economic intuition into the sources, significance and form of agglomeration economies. The new economic geography has provided a more rigorous theoretical analysis of their role. More recently empirical work, reviewed in, for example, Rosenthal and Strange (2004) and Melo *et al.* (2009) concludes that while the impact of agglomeration economies varies by sector, credible estimates of their aggregative impact range from an elasticity of perhaps as low as 2% up to about 8% with the most plausible value being around 3% to 4%.

How spatial are spatial disparities? The case of regional differences

As Gill (2009) points out, the existence of agglomeration economies inevitably implies spatial disparities between regions: or more precisely between cities of different sizes. All else equal empirical work on agglomeration economies implies that total factor productivity, and so wages, will be higher in larger cities: to illustrate applying the mid-point of the range of elasticities quoted above – we should expect on the basis of size alone that wages would be of the order of 25% higher in London than in Carlisle just because London is a great deal bigger. As emphasised in OECD (2009), however, the disparities we actually observe in rich countries can be significantly larger. But still they do not necessarily signal either that policy should try to push development from the richer region to the poorer, nor that the observed disparities reflect the true extent of disparities in real incomes or welfare between individuals of given skills, motivation and education.

As others have observed, larger cities have higher prices – especially housing costs – eroding the real value of money income differences. They also typically have more skilled labour forces and a structure of employment favouring high paid occupations. In 2008, for example, 46.4% of London's employed labour force had degree level qualifications compared to 28.6% in the north. As Gibbons *et al.* (2010) conclude, although the order of magnitude of regional differences in England is similar to that in other OECD countries, truly spatial differences seem to account for at most 10% of measured differences. The role of what might be thought of as spatial sorting of people of different characteristics into different regions and places is a far more significant element in the explanation of aggregated headline regional differences.

Intra-urban differences: Policies for distressed areas

At least for differences between regions or cities we know there are substantial adjustment costs. Migration to take advantage of higher wages or better life opportunities elsewhere is costly and disruptive; in many countries policy explicitly, or more often implicitly, places obstacles in the way of would-be migrants. For example, in the United Kingdom, a combination of social housing policies and planning policies constraining land supply in prospering and growing areas (and so raising house prices where people might want to go) impede migration. People, particularly in Europe are geographically sticky and this provides at least one potential justification of policies designed to promote the development of lagging regions.

When it comes to policies addressing the problems of distressed neighbourhoods no such potential justification exists. There is now overwhelming evidence that house and land prices capitalise a wide – perhaps an almost complete – range of tangible and intangible features of location. Indeed there is evidence that house prices capitalise expected changes to locational attributes. We know that the value of announced transport improvements is capitalised ahead of actual delivery. Irwin has shown in the United States that the value of access to open space varies according to how reliably that open space is conserved (Irwin, 2002). In the United Kingdom, access to schools is determined by where families live. In most jurisdictions children have to go to the school designated as their neighbourhood school. The result, as an extensive literature now shows, is that school quality is fully capitalised in house prices. Cheshire and Sheppard (2004) showed something even more subtle about this process, however. It appeared to be not just the current measure of school quality that was reflected in house prices but the risk that the quality of the local school might change. A given level of current quality was discounted by

its past variation and was further discounted if there was a concentration of new housing in the neighbourhood. It appeared that more new housing locally meant the future quality of the school to which one's child would be allocated was less reliable (and so, to anxious parents, less valuable) because educational policies meant that catchment area boundaries would be likely to change – policy was to adjust boundaries to ensure all schools had a similar utilisation of capacity so in neighbourhoods with growing populations boundaries were more likely to be re-drawn.

The wealth of hedonic studies of housing and land markets that has been generated in the past 40 years shows beyond doubt the range and subtlety of the process. People pay through the housing market for better views, access to quality and larger parks (and parks of given characteristics are more valuable in higher density and lower crime neighbourhoods, all other things equal); quieter and cleaner environments, lower neighbourhood crime rates or access to better leisure facilities.

People even pay for the value of social capital in the neighbourhood. This seems to influence behaviour in the construction of social capital. Owner occupiers whose asset values improve if there is more social capital in a neighbourhood invest significantly more in generating it than do tenants. Even more significantly the energy expended by owner occupiers in constructing social capital varies systematically with the local elasticity of supply of housing. In neighbourhoods already built-out, housing supply is inelastic so more social capital increases local house prices and asset values: in other words generates a stronger price incentive which house owners respond to. Tenant's rents rise if social capital in their neighbourhood increases so in a sense they are not net beneficiaries; and reflecting this balance of incentives tenants invest more in social capital in the workplace (Hilber, 2010).

Most obviously of all people pay for that fundamental driver of urban economic theories of land values – better access to better jobs. The conclusion of an increasing body of highly rigorous research must therefore be that everything that makes a neighbourhood a pleasanter place in which to live or enhances people's real income prospects, is priced in the housing market. We may think we are distributing public goods paid for out of public taxes, such as open space, cleaner air, less noise disturbance or access to public education, with access independent of income. But that is a perhaps sad delusion. It is all priced in urban land markets and just as richer people can afford better healthcare, bigger houses and more and more luxurious holidays, so it is with exposure to atmospheric pollution or crime; or access to better paid jobs or better schools.

It follows that we know that it is the fact that a family is poor that forces them to live in poor or distressed neighbourhoods. It is not that poor people might not prefer to live in nicer neighbourhoods: it is that they cannot afford to do so because everything that makes a neighbourhood nicer is fully reflected in house prices and rents. There is clear evidence of a direct causal connection between having the characteristics which make you poor – whether low skills, inadequate education, significant health issues or just a run of bad luck – and living in a poor neighbourhood.

For the policies we are imposing to regenerate neighbourhoods or generate or sustain "mixed communities" to work in their declared sense, however, that is to improve the lives of poor, perhaps socially excluded, people, it would be essential that the causation ran the other way. That is that living in a poor neighbourhood made your life less tolerable or damaged your life chances independently of your personal and other characteristics.

Superficially this is not an unreasonable thing to believe. It is consistent with the common sense observation that most things that affect the lives of those living in distressed neighbourhoods are worse: crime is higher, health indicators worse, unemployment and sickness rates are worse and – of course – incomes are lower.

But correlation does not demonstrate causation. It is hard to prove that there is absolutely no independent negative impact on people's welfare of living in distressed neighbourhoods. But the opposite has been demonstrated. We do know that there is no credible evidence that poor neighbourhoods, independently of people's characteristics, reduce their prospects or systematically worsen their lives. There are two types of rigorous studies to draw on from countries as different as Sweden, the United States, Canada and the United Kingdom. The first type is the growing number of cohort studies which track the same people over 10, 20 or in the case of Oreopoulos (2003), 30 years, to see if the characteristics of the neighbourhood or housing in which they originated have any independent impact on their later lives. Bolster *et al.* (2007) found no significant effect on wages in the United Kingdom; indeed although not significant in a statistical sense, originating in a poorer neighbourhood was associated with better economic outcomes ten years down the line. Van Ham and Manley (2010) similarly found no impact on economic outcomes for Scottish school leavers ten years later determined by either neighbourhood prosperity or concentration of social tenants – one frequent assertion being that neighbourhoods with a concentration of social housing blight people's lives. At least in Scotland, there is no evidence of that. The Swedish evidence (Edin *et al.*, 2003) relates to ethnicity – the concentration of ethnic minorities in small neighbourhoods. This combines two sorts of methodology – following individuals up over time and also randomly assigning them to neighbourhoods of different character. Swedish policy favours mixing the ethnicity of neighbourhoods and so assigns incoming migrants to social housing to achieve that aim. To somewhat simplify, Edin *et al.* (2003) found this policy achieved the direct opposite to that which was intended. Immigrants who were assigned (so there was no self selection, potentially biasing results) to more ethnically homogeneous neighbourhoods did better in the labour market.

The other rigorous methodology to establish whether distressed neighbourhoods impose additional disadvantages on their inhabitants beyond those that make them poor in the first place is to move people from poor neighbourhoods to more affluent ones. The best known such study is the US Moving to Opportunity Programme: its name suggests the aspirations of its original proponents in the early 1990s. Here there have been numerous studies. One of the more recent and rigorous is that by Kling *et al.* (2007). Again those who participated in the programme and moved to more affluent neighbourhoods showed no significant improvements. Some indicators were better and some were worse but the only indicator to change in a statistically significant way – property crime amongst younger males – showed deterioration. Another more recent and smaller scale study (Weinhardt, 2010) of educational outcomes in the United Kingdom for children randomly moved (via the social housing system) to the most distressed neighbourhoods also found no deterioration. The characteristics of the new neighbourhoods – despite them being in the worst 2% of all neighbourhoods in the United Kingdom on various social indicators – had no measurable impact on the subsequent educational achievement of young people.

These studies do not absolutely prove that there are no independent damaging effects on people's lives of living in the poorest neighbourhoods in our cities; but they certainly find no evidence in support of that belief; and that belief provides the basis for widely adopted and expensive place-based policies.

There is also another factor to consider. One of the great welfare enhancing things cities provide is greater choice: not just in terms of goods and services but in terms of life styles and neighbourhoods. In a small town people have to live with their neighbours who happen to live there. The larger the city, the greater variety of everything, including neighbourhoods which it will offer. I can choose to live in a neighbourhood with others of similar ethnic, religious or cultural origin; I can choose to live in a busy neighbourhood with lots of entertainment for young singles; or with others bringing up young children; or in a quiet, low crime neighbourhood with green spaces and suitable for those seeking an urban, but quieter, life; or I could choose some other sort of neighbourhood. In cities as large and cosmopolitan as London or New York there is an almost limitless choice of neighbourhood to suit all kinds and conditions of family; but only, of course, subject to the constraint imposed by their incomes. So in welfare terms a variety of neighbourhoods is a positive feature of city life, just as a variety of cities enhances a country's overall welfare.

The character of neighbourhoods and of our neighbours does not just add variety. The evidence suggests that it supports economic life as well. Neighbours are fruitful sources of information about jobs and research shows that these sorts of informal contacts are more important methods of job search for poorer and less skilled people than they are for richer people who tend to use more formal methods. Neighbours and neighbourhoods also provide social support. Richer neighbourhoods are characterised by facilities serving richer people. A Michelin starred restaurant or Montessori nursery is not much use for poor parents. A cheap take-out food shop or a neighbour willing to trade child minding is, however. When policy insists on mixing people up these advantages of self-selection and choosing compatible and complementary neighbours, collectively generating a larger market demand for appropriate local services, are lost. When people are left free to choose for themselves they sort into relatively homogeneous and suitable neighbourhoods. That sorting and selecting process, however, is always constrained by incomes.

The increasing amount we know about how urban labour markets work has similarly negative implications for local place-based interventions in labour or property markets within cities. There is not space to summarise all the work that has been done but the evidence overwhelmingly supports the conclusion that labour markets in metropolitan areas work seamlessly. Because of cross commuting patterns, if opportunities are improved in one location, for example by local job creation, the impact on local unemployment rates is quickly diffused over the whole set of interacting local labour markets connected by commuting flows. This is because, in contrast to migration, changing where you commute to is almost costless. The search patterns of both would-be workers and employers adapt to differential labour-market conditions. If job opportunities improve in one neighbourhood (because of, say, local construction or job creation) workers are attracted in from surrounding neighbourhoods; that in turn improves the prospects of finding a job in those surrounding neighbourhoods and so workers are attracted to them; and so the process goes on until the originally localised impact on job opportunities is diffused throughout the urban labour market and people of given characteristics conditioning their employability end up with similar job prospects regardless of what neighbourhood they live in. So within cities, because of the low cost of adapting commuting and search patterns, local job creation has no impact at all on local unemployment.

Nor is it a lack of accessibility that "excludes" the poorest and least skilled from jobs. Again the causation runs the other way about. If we improve transport (for example by extending London's Jubilee line or constructing CrossRail) this has a localised effect on

raising house prices and rents in the neighbourhoods with improved access to jobs. Over time richer and more skilled residents will populate these now more accessible neighbourhoods squeezing out the less skilled original residents. Equally from the point of view of those with the least favourable labour-market characteristics and so with little prospect of getting a job, they are better off living in neighbourhoods with worse access to jobs: that way they have a bit more income left over for necessities since housing is cheaper in less accessible neighbourhoods.

The overall conclusion is that the patterns of spatial segregation we observe in cities are really just a spatial articulation of social inequality. Helsinki, in a very equal society such as Finland, exhibits much less sharp distinctions between rich and poor neighbourhoods. In cities such as London or Chicago, where there is a very unequal distribution of incomes, residential segregation is very sharply, even harshly, delimited. There are many geographical fault lines with rich neighbourhoods separated from some seriously distressed ones, sometimes only by a major road or jurisdictional boundary; or, increasingly, by a security gate.

If we spend enough money, we can always renovate or reconstruct neighbourhoods. But if demand is there so can private investment. To justify doing this with public money, however, requires that there is a market failure or that such activities will generate a redistribution in favour of the poor. Again, however, the evidence that such policies work in this way is almost non-existent. If there are rich and poor in a city, regenerating neighbourhoods simply shifts the problems about. If it is successful, as with the London Docklands (where there was the immense natural advantage of being located almost within walking distance of some of the most expensive real estate in the world), new jobs, for new workers, come in and the local housing market adapts, with rising prices and new private investment, to house them.

The attempts to regenerate London further east, however, have distorted UK infrastructure investment and held back wider economic development for two decades. To take just one example: while Stratford International station cost more than GBP 200 million and the associated diversion of the high speed rail link to the Channel Tunnel added perhaps a further GBP 2 billion to its cost and five years to its construction time, no train has ever stopped there; at the same time London's tube (metro) system was falling apart from lack of investment. It is still a matter of judgement, but mine is that the attempts to regenerate this part of London via the 2012 Olympics and the Thames Gateway project will turn out to be similar white elephants, not only swallowing up scarce public funds but probably leaving mainly poorer people with depreciating assets and bills to pay.

Finding a new policy balance

That there are really serious problems of inequality and unfairness in many rich OECD countries is incontestable. It is also obvious that within cities a very visible manifestation of those problems is in distressed neighbourhoods where poor people are concentrated. My contention, however, is that we need to address such problems seriously and design interventions based on a more rigorous understanding of their causes. They are social problems and so far as the best research to date shows they are not caused by where people live or the conditions they live in. The most plausible routes to having a real impact are to divert differential resources to providing skills, education, health and childcare to the people who live in the most distressed neighbourhoods; but also to all similar people wherever they live. So there can be a case for an area-based policy delivery; but nothing can

be achieved either by moving people about or providing local jobs or renovating buildings. It is the welfare of people, not buildings or indeed neighbourhoods, which is important. It would be likely to be effective to pay teachers more to teach in the most problematic schools and to ensure that more, not as is often the case, less policing effort is put into crime reduction in poor areas. So although the target of policies to relieve poverty should be people, it may often make practical sense to deliver the policies to the places where the poorest are concentrated.

We must distinguish between disparities between cities or regions from disparities between neighbourhoods within cities, however. This is largely because migration can be so difficult and costly although the barriers to regional adjustment presented by migration costs vary from country to country. They seem generally to be higher in countries with more ancient histories of settlement and more engrained regional distinctions of culture and language.

Economic and social change inevitably means, however, that different cities and regions grow or decline at different periods. In the old industrial countries it is the old industrial regions and traditional port cities that have been declining – and most will continue to. While it is certainly true that cities can successfully adapt to change (Boston or Leeds seem to be two relatively successful adapters) the history of policy to regenerate regional economies has mainly been one of trying to push water uphill.

Policy cannot successfully assist every declining region. We need to discriminate somewhat ruthlessly between places with chances and others where the most fruitful contribution of policy is to help people adapt and manage decline. Agglomeration economies may help guide the selection of places that can more successfully adapt as will the existing local supply of transferable skills and industrial structure. Medium-sized port cities, especially those that grew up to service a declining trade (such as the imperial trade routes of 19th-century Europe), coal mining areas and cities with economies specialised in a limited number of older heavy industries are the real problems in the old industrial countries. Former regional capitals or university or commercial cities are more likely to be candidates for successful regeneration.

Many policies aimed at regeneration, however, directly help people: education, skills, effective delivery of public services are all examples. One great advantage of training and education is that the beneficiaries can take their skills elsewhere if prospects locally do not improve. It is seldom wasted. Expenditures on infrastructure or attempts to create new clusters often end in total waste.

Perhaps most important of all is that spatial policies should recognise the importance of agglomeration economies. There may be forces leading cities to become too big. There are costs of city size as well as benefits. Successful urban policies can offset for many of the costs however. It is ironic that while we spend huge sums on policies, such as cluster development or creating mixed communities which have doubtful or more probably negative payoffs, we shy away from policies which could certainly reduce the costs of city size and so allow us to benefit more from agglomeration economies. The most obvious policy is to introduce congestion pricing. Here we have a clear and well understood problem of market failure and both the intellectual and technological solution. But we seem to lack the political will to implement the solution. Similarly one of the costs of urban size is that housing and other space costs increase. Again we have policies which reinforce rather and offset for this problem. In the United Kingdom, containment policies and densification deliberately

constrain the supply of urban space and drive up its price. This effect is greatest exactly where resources are most productive because that is where the pressure of demand is greatest (OECD, 2011, Chapter 2). This is most obviously a problem in a very large and successful British city like London, but is spreading to other countries, and even in the United Kingdom a recent study (Cheshire and Hilber, 2008) established that via land-use controls the British were imposing the equivalent to a tax of 250% of marginal construction costs on office building in even a city as economically depressed as Birmingham.

It is extremely unlikely that policies designed to deliberately reduce the benefits of agglomeration economies in one city will help others. For policy to act as if that proposition were true, without really good supporting evidence, is thoroughly dangerous.

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PART III

Chapter 9

Non-market Effects on Agglomeration and their Policy Responses: Can We Overcome the Mismatch?

by
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This chapter focuses on the effects of agglomeration, distinguishing certain non-market effects – particularly the tendency of many governments to bias public investment spending in favour of primary or capital cities – from market effects (productivity gains, transportation costs, etc.). The chapter emphasises that agglomeration is not only an economic phenomenon but a political and social one and that its determinants are similarly complex. For policy makers, it is important to distinguish between the non-market effects and market effects of agglomeration. Regional policy responses to agglomeration processes will differ between developing and developed countries, and these responses need to reflect the full range of market and non-market causes of agglomeration.

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Why such a difference of views on regional policy?

Regional policy has a long history and has always been subject to controversial debates on its merits and limitations. The theoretical development of new economic geography (NEG), stimulated by the pioneering work of Krugman (1991), has further fuelled the debate on the effectiveness of regional policy among academics in different fields such as economics and geography. The emergence of the European Union and its emphasis on regional policy with the Structural and Cohesion Funds has been another important reason for the heated debate on regional policy, since the effectiveness of regional policy has not only interested academics but reflects a genuine policy issue within the European Union. As a matter of fact, the debate on regional policy is not confined to Europe. As Krugman (2011) notes, the issue of agglomeration and regional policy is perhaps more relevant and important in the developing world than in developed countries. The fact that regional disparities in China are becoming one of the most important political challenges in that country demonstrates the magnitude of its importance in rapidly developing large countries such as China and India.

The debates on the right design of regional policy seem to have intensified recently, perhaps because the recent economic crisis has forced governments around the world to focus on the best in policy design. In a recent *Financial Times* column, Glaeser (2011) emphasised the economic benefits generated by big cities such as London, and advised governments not to discourage investment in such big cities by subsidising less productive places. In a similar vein, Huang (2011) argued in another recent *Financial Times* column that China's urbanisation rate should be much higher and its major cities should be much larger. In an article posted on *VoxEU*, Gill (2010) emphasised the market mechanisms that shape agglomerations around the world, and warned against the futility and ineffectiveness of regional policy.

The view that big cities are the most productive places for investment, however, is not without criticism. In a reply to Gill (2010)'s criticism on regional policy, Barca and McCann (2010) argue that "agglomerations are the effect of billions of dollars-rupies-euros-renminbi of taxpayers' money used by governments to boost agglomerations". Garcilazo *et al.* (2010) also argue that production capabilities of lagging regions are just as important as those of big cities, and aggregate growth of an economy depends on maximising the growth potential of lagging regions.

It is worth noting that the debates on regional policies are based on different assumptions as to the driving forces of agglomeration. In the case where agglomerations are mainly the result of market forces, as assumed in most of the NEG models, regional policy that tries to fight the market is ineffective and inefficient. But in the case where agglomerations are significantly affected by non-market forces, the argument that big cities are the most productive places may seem much too simplistic.

Non-market effects of agglomeration

Some non-market effects of agglomeration, such as congestion and pollution, are well addressed in the analysis of the merits and limitations of agglomeration. However, other types of non-market effects of agglomeration and urban primacy are relatively less known. As a result, policy design in response to congestion and pollution is well developed, but the same is not true for other types of non-market effects of agglomeration. To be more specific, a country's major cities such as its capital city (Seoul) or primary city (Shanghai) benefit from many types of direct investment by the central government. International airports, high-speed railways, subways, investments for the Olympics and the World Cup, creation of satellite cities and other essential public services such as education, healthcare and environmental protection for primary cities are all financed in whole or in part by the central government. The cumulative effect of the central government's direct investments in primary cities often dwarfs that of the subsidies provided to politically less important regions. In this sense, many of the central government's sector-specific policies are implicit regional policies in that their impact differs depending on the region, and need to be understood as such.

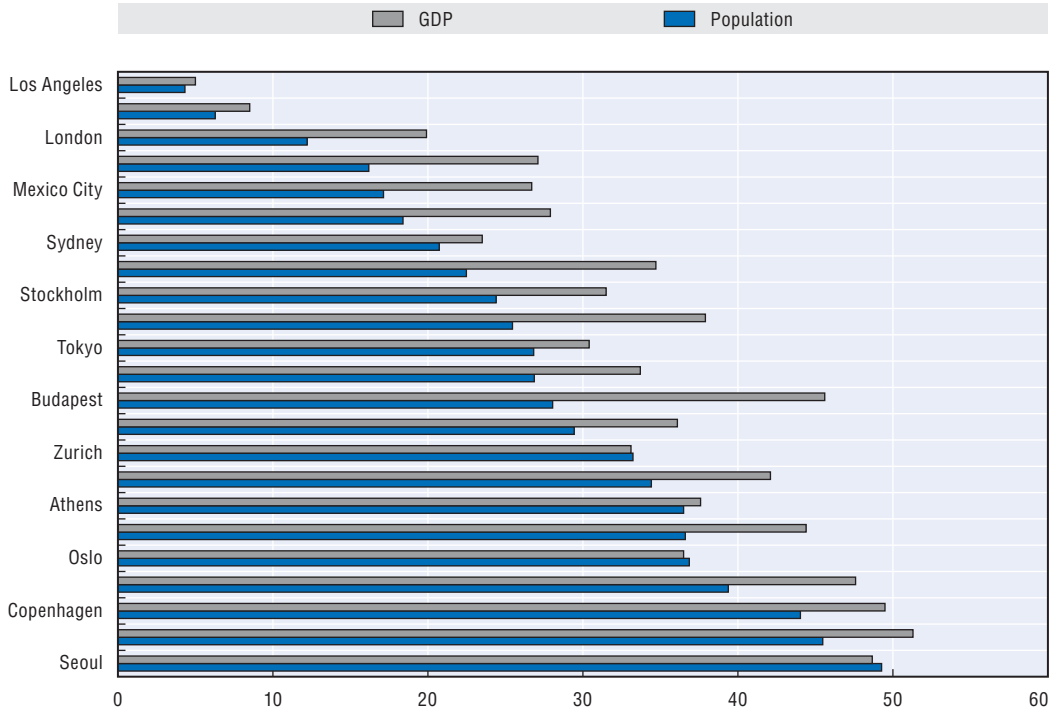
In the literature on agglomeration, most NEG models are based on the properties of market conditions and production functions such as iceberg transportation costs,[1] increasing returns to scale technology, and labour mobility. However, recent theoretical and empirical work on agglomeration recognises non-market effects of agglomeration. Duranton (2008), for example, observes that trade-based explanations of urban primacy are weak, but political and institutional factors appear to lie at the root of the primacy phenomenon. The role of non-market forces, especially political factors, was also investigated by Davis and Henderson (2003). They argue that political institutions directly affect urban concentration by determining the ability of central governments to favour one city such as a national capital. In an early empirical study on this issue, Ades and Glaeser (1995) find that the predominant cause of urban concentration is politics, not policy.

As to the extent of excessive agglomeration caused by non-market effects, we do not have enough evidence. However, in one of the few studies on this issue, Henderson (2003) finds that average primacy, defined as the share of the largest metro area in relation to the country's national urban population, is about 0.31, although the figure can be much larger or smaller depending on the size of land and the country's population. In a policy paper on China, Henderson (2009) notes that, because of fiscal and capital market favouritism, the major cities in China such as Shanghai or Chongqing may already face the prospect of over-population. Therefore he recommends that, based on the analysis in Au and Henderson (2006), China needs to focus on the development of medium-sized cities. Finally, in a work on the link between development and urbanisation, Henderson (2010) notes that certain regions and cities are heavily favoured in terms of capital and fiscal allocations, which raises the issue of increasing inequality between people in favoured *versus* other regions.

Agglomeration and urban primacy in the world

Productivity in metropolitan regions in OECD member countries is quite varied. In Figure 9.1, the grey and blue bars indicate the share of GDP and population of the metropolitan regions. For most regions, the grey bar is higher than the blue bar, implying that labour productivity in such regions is higher than the average. London, Istanbul,

Figure 9.1. **Population and GDP shares of OECD metropolitan regions, 2004**



Note: The figures for Korea are from 2009.

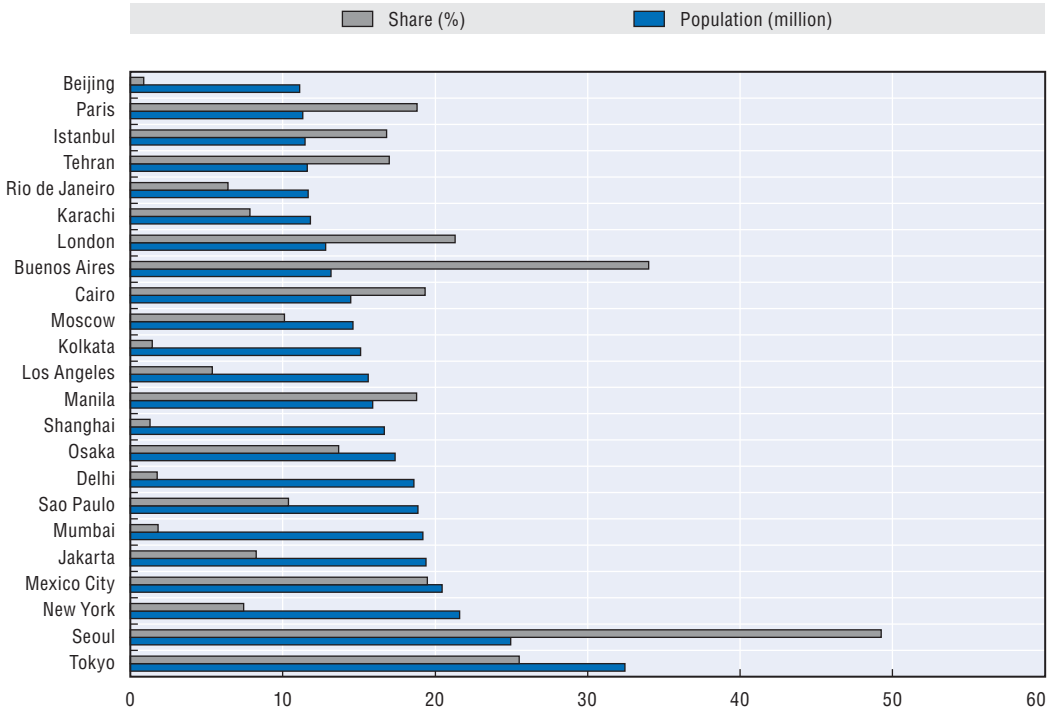
Source: OECD (2006), *Competitive Cities in the Global Economy*, OECD Publishing, *http://dx.doi.org/10.1787/9789264027091-en* and CIA (2006), *The World Factbook*.

StatLink http://dx.doi.org/10.1787/888932521011

Mexico City, Paris, Prague, Stockholm, Lisbon, Budapest all belong to this category. Not taking into account urban externalities such as congestion and pollution, immigration into these regions is likely to increase overall national productivity. There are, however, some regions where the shares of GDP and population are not very different. Los Angeles, Zurich, Athens, Oslo, and Seoul belong to such a category. Taking into account urban externalities of large metropolitan areas, these cities may already be facing the prospect of over-population, although, according to Henderson (2003), the size of primacy in a small country such as Switzerland, Norway, and Greece can be as high as 0.5. Since the shares of population in Zurich, Athens, Oslo are all below 0.4, it is not clear whether these cities are facing the prospect of over-population.[2] One clear exception is the Seoul metropolitan region. As Figure 9.1 shows, the population share of the Seoul metropolitan region is close to 0.5. According to Henderson (2003), Korea is a medium-sized country with a population of around 50 million. Thus the size of the Seoul metropolitan region is way over the average primacy rate found in Henderson's study.

While Figure 9.1 lists metropolitan regions in OECD countries, many of the largest metropolitan regions are found in developing countries, as shown in Figure 9.2. What is notable in this figure is again the Seoul metropolitan region. With a population of 25 million, it is the second largest region after the Tokyo metropolitan region and even larger than Jakarta, Mumbai and Shanghai. The reason why metropolitan Seoul is so exceptionally large is not clearly known yet. Discussing one of the few studies on agglomeration in Korea, Henderson (2005) noted that manufacturing in Korea had long ago spread away from major metro areas and their satellites to rural areas and other cities. This

Figure 9.2. **Population of the largest metropolitan regions in the world, 2004**



Note: The figures for Korea are from 2009.

Source: Forstall, R.L., R.P. Greene and J.B. Pick (2009), "Which are the Largest? Why Lists of Major Urban Areas Vary So Greatly", Tijdschrift voor economische en sociale geografie, Vol. 100 and CIA (2006), *The World Factbook*.

StatLink http://dx.doi.org/10.1787/888932521030

can be confirmed in Figure 9.1, which shows that the production share of metropolitan Seoul is even smaller than its population share. One hypothesis for the explanation of the particularly large population of metropolitan Seoul is the mismatch between public-service responsibilities and the fiscal resources of local governments.[3] In Korea, all important public services such as education, healthcare, welfare programmes and police services are basically the responsibility of the central government. Therefore expenditure responsibilities of local governments tend not to increase proportionately with population. On the other hand, metropolitan Seoul enjoys a large amount of local tax revenue collected from headquarters of corporations, which helps explain why the per capita tax revenue of Seoul city is almost 1.7 times higher than the Korean average.[4] With the primary-city bias of public investment discussed above added to this problem of wrong design of fiscal decentralisation, metropolitan Seoul seems to have grown exceptionally large.

Henderson (2010) observes that we do not know the social consequences and the extent to which inequality is heightened by agglomeration. The case of Korea might provide one such example. After the 2002 presidential election, the creation of a new capital city became the most important political controversy in Korea. After bitter political infighting over the issue of balanced regional development, the creation of an administrative city on rice fields some 200 km south of Seoul was decided. Most government departments are to move to the new administrative city by 2013, and we do not yet know the extent of the social and economic costs associated with this change, although some hope that the benefits from more balanced regional development will outweigh the costs.

Conclusion

Agglomeration is not only an economic phenomenon but a political and social one as well. It is therefore important to identify the non-market effects as well as the market effects of agglomeration. Many times, controversies on regional policy seem to arise because differences are not made between market and non-market effects and between developed and developing countries. In cases where non-market effects are important explanations of excessive primacy, simply subsidising non-primary regions is likely to be ineffective and wasteful. On the other hand, the argument that the metropolitan region is by definition the most productive place is not very convincing either. In developing countries, the best regional policy may be the one that directly addresses the non-market effects of agglomeration. Of course, it is not easy to change the political and institutional environments in developing countries. But recognising the long-term consequences of primary-city favouritism and providing non-primary regions with good public services such as education and healthcare seem to be important not only for political stability but to encourage the efficient allocation of population across regions as well.

As for developed countries, the problem of non-market effects of agglomeration might be less serious. However, a more fundamental question can be raised in this regard. When an economic and political union such as the EU is created, is it politically possible not to subsidise less developed regions in the Union? This question ends up focusing on the "how" rather than the "why", since without such a political consensus, the creation of the Union would likely not have been possible. In terms of effectiveness, a right way to match political and economic goals to fiscal-subsidy tools can be debated. However, it means that we need to identify the best way to apply regional policy or interregional transfers, rather than ignore the political and institutional constraints that necessitated them in the first place.

Notes

1. That is, transportation cost increases with distance.
2. In a recent study on agglomeration in Norway, Rattsø and Stokke (2011) find that regions with large increases in population do not show systematic higher income growth.
3. More detailed discussion on this issue can be found in Kim (2009).
4. In Korea, tax rates of all local taxes are the same.

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PART III

Chapter 10

Why and When Development Policy Should Be Place-Based

by
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This chapter argues that "spatially blind" policies are rarely spatially neutral, because they typically end up as capital-city promotion policies. Ostensibly, this reflects the economics of agglomeration, but to a great extent it is a product of the national rent-capturing influence of capital-city elites in all areas of public life. Since the evidence suggests that many core urban centres will grow without the need for significant policy interventions, the chapter raises the question as to whether development objectives should be shifted from promoting efficiency in the core to enhancing the potential for growth and development in every territory. The chapter argues that place-based approaches offer a greater possibility of harnessing untapped potential in all regions in a co-ordinated and systematic way.

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Globalisation and development

The way we think about economic geography has been transformed over the last 20 years by the experience of the modern era of globalisation and by numerous analytical and empirical breakthroughs. This had led to a thorough rethinking of how economic development processes occur and how these processes are related to geography. Endogenous growth theory, new economic geography, institutional economics and development in spatial econometrics and spatial data analysis have brought to the fore issues such as human capital, innovation agglomeration, distance, institutions, and broader notions of capital. The often previously neglected role of space has now become centre stage in many debates, as our understanding of the role played by localities and regions in fostering economic growth and prosperity (Rodríguez-Pose, 2011) has increased. In one sense, space is becoming increasingly "slippery", inasmuch as capital, goods, people and ideas are seen to travel more easily (Markusen, 1996; Friedman, 2005). In another sense, however, space is becoming increasingly "sticky" and "thick" in that capital, goods, people and ideas tend to remain concentrated – and often in large agglomerations (Markusen, 1996; McCann, 2008; Rodríguez-Pose and Crescenzi, 2008). In spite of many earlier predictions, globalisation has actually made space and place more rather than less important (McCann, 2008).

The unique aspects of a locality and the capacity of territories to root economic activity in the local social, institutional and economic fabric are seen by many scholars as essential for fostering comparative advantage (Storper, 1997). In policy terms, such issues are regarded as critical to enhance the capacity of economic development strategies to promote and achieve sustainable development goals (*e.g.* Storper, 1997). In other words, the specific institutional arrangements and constructs of any space are increasingly regarded as the filter through which economic activity takes hold in different territories (Acemoglu and Robinson, 2000; Rodrik *et al.*, 2004; Acemoglu and Johnson, 2006a, 2006b; Storper, 2011). A serious awareness of the heterogeneity, variety, and specificity of regions and localities is regarded as essential to understanding local growth and the possible policy responses needed to encourage it.

In contrast, however, over the last five or six decades economic development policies all over the world have tended to resemble each other, with little or no consideration given to regional specifics. Development policies have until now generally remained instruments for the provision of "hard" infrastructure such as roads, railways, sanitation, water and the like, under a national sector-based state aid agenda. Such policies are appealing to policy makers and politicians because they are visible, immediate, and their impacts are perceived as being easy to understand (Pike *et al.*, 2006). As we now are increasingly aware, the actual outcomes of these policies are often unintended, unexpected and undesired. Indeed, a growing body of research has demonstrated that even if the aggregate impact of infrastructure policies has sometimes been positive, these types of policies have often led to greater regional polarisation and to an increasing economic marginalisation of many

peripheral regions where significant infrastructure investments have taken place (Roberts *et al.*, 2010; Vanhoudt *et al.*, 2000). Similarly, state aid and industrial intervention have wasted resources on declining industries, lame ducks and big projects (Ulltveit-Moe, 2010). In general, these policies have struggled to cope with the more heterogeneous economic reality emerging from globalisation (Roberts, 1993), often ending up as "strategies of waste" (Rodríguez-Pose and Arbix, 2001).

Changes in development policy thinking

By and large, governments and international organisations involved in development and the design of development policies have been slow to react to the challenges of globalisation, to the increasing regional polarisation in many parts of the world, and also to the changes in growth and development theory. But this has changed in the last two years. After decades of what can be described largely as "business as usual", five major reports completely rethinking development strategies were published between 2009 and 2010, one of which adopts a "space-neutral" perspective while the other four adopt a "place-based" perspective.

The *2009 World Development Report: Reshaping Economic Geography* (World Bank, 2008) has been so widely discussed that we need not dwell on the details or specifics of it here, other than to say at this stage that it explicitly calls for a spatially blind approach to economic development.

Of the four major reports advocating place-based policies, perhaps the best known is the independent Barca (2009) report, *An Agenda for a Reformed Cohesion Policy*. This primarily theoretical report posits that place-based policies are the best way to tackle the "persistent underutilisation of potential and reducing persistent social exclusion" (Barca, 2009: V4) in all areas of Europe. The report draws extensively upon an institutional framework and traces underdevelopment traps evident in a given place. These traps are argued to be primarily related to either the (in)capacity or the (un)willingness of its local elite to reform itself when needed, and to the centrifugal effects of agglomeration promoted or seconded by public interventions in other places. From this perspective, exogenous public policy action is seen as a way to trigger endogenous change. A balance is then called for between exogenous and endogenous forces, by which local actors are tasked to set targets and design projects tailored to their localities, while the external "development agency" sets the general conditions that local actors are to follow.

Starting from an empirical and econometric perspective rather than from a theoretical perspective as in the Barca (2009) report, the OECD (2009a) report entitled *How Regions Grow* reaches a remarkably similar conclusion. The conclusion of this report is that the objective of development intervention is to promote growth in all regions, as all regions display growth and development potential (OECD, 2009a). The report posits that synchronised place-based interventions defined as integrated regional policies (OECD, 2009a; Pike *et al.*, 2006), co-ordinating infrastructure provision, with education, business development and the promotion of innovation, is the most effective way of achieving not only greater local development but also, via geographical spill-overs, greater aggregate growth (OECD, 2009a; Farole *et al.*, 2011). A further OECD (2009b) report entitled *Regions Matter* stresses the importance of understanding the individual characteristics of regions and their place specificity. Once again, it underlines that opportunities for growth exist in every region and that the role of development intervention is to mobilise regional assets and to exploit

synergies (OECD, 2009b). This report also proposes that it is necessary to move well beyond the "one-size-fits-all" development approaches typical of those traditionally offered in the past and also by implication the "one-size-fits-all" place-neutral agenda offered by the World Bank (2008).

A final influential report endorsing place-based approaches has been the Corporación Andina de Fomento's *Desarrollo local: hacia un nuevo protagonismo de las ciudades y regiones* ("Local Development: Towards a New Protagonism of Cities and Regions") (CAF, 2010). This report looks at development challenges from a Latin American perspective and in this sense the report focuses on a geographic space similar to that which was targeted by the World Bank (2008) report. However, the conclusions of the CAF (2010) report are very different to those of the World Bank (2008) and are largely in the same vein as those in the Barca (2009) and OECD (2009a, 2009b) reports. Specifically, the CAF report argues that one of the answers to development challenges in Latin American countries is the promotion of integrated policies for each territory, with special attention to the needs of cities, city-regions and regions. Consistent with the other place-based reports, the CAF (2010) report emphasises the role of local and regional governments and institutions in development process and emphasises the potential of local governance and "soft" institutions as key factors in promoting sustainable development (CAF, 2010).

While such a proliferation of reports may be just a coincidence, it is more likely reflecting a collective reaction within many academic, institutional and political circles to the growing unease with the way development policies were developed and the consequences of their implementation. That said while the World Bank and the so-called Washington consensus had become a popular target for criticism (Stiglitz, 2002; Fine, 2003; Rodrik, 2006), the European Union's regional development policy, the largest concerted effort aimed at achieving territorial cohesion, was also not without its critics (Boldrin and Canova, 2001; Rodríguez-Pose and Fratesi, 2004; Dall'Erba and Le Gallo, 2008). A response was therefore definitely long overdue.

Space-neutral *versus* place-based approaches

The paradox emerging from this sudden burst of interest in the fundamentals of development intervention, however, is that after decades of lack of change, development scholars and practitioners are proposing, and are also now therefore confronted with, two radically different paradigms: spatially blind *versus* place-based approaches.

For those promoting or defending spatially blind approaches (World Bank, 2008; Gill, 2010), their basic position is that intervention, regardless of context, is the best way to resolve what they perceive as the dilemma of whether development should be about places or about people. Advocates of spatially blind approaches underscore that the promotion of agglomeration and the encouraging of interregional migration not only allow individuals to reside where they are economically better off, but such spatial transformations boost incomes and living standards (World Bank, 2008). This basic argument is not new in that it goes back to the seminal work of Borts and Stein (1964), although the novel twist in the recent argument is that, following on new economic geography themes, agglomeration forces are assumed to be largely both all-pervasive and dominant. From this perspective, spatially blind policies are therefore also characterised by their proponents as being "people-based" policies (Gill, 2010), in that they are regarded as representing the best approach for delivering an improvement in people's livelihoods and employment

opportunities, irrespective of where they actually live. On the basis of a mixture of the arguments derived largely from Rostow (1959) and Williamson (1965), such policies are also assumed by space-neutral advocates to lead to a more even social and geographical distribution of wealth in the long run (World Bank, 2008).

In marked contrast, the assumption that there is a policy trade-off between places and people is rejected by the place-based approach (Barca and McCann 2010; Garcilazo *et al.*, 2010). Also contested by the place-based approach is the assumption that space-neutral policies will best allow for a long-run convergence and a more even distribution of wealth (Barca, 2009).

In and of itself, the place-based approach has a long tradition to it (Bolton, 1992) with many well-rehearsed elements relating to contingent valuations, options values, and the pricing of public goods. However, contemporary place-based arguments are much more sophisticated than earlier ones, in that they interweave traditional arguments with insights from modern institutional economics. The contemporary place-based approach has two fundamental aspects to it:

- First, place-based theories assume that geographical context, as defined by the economic, social, cultural and institutional dimensions of a locality, really matters for all aspects of economic and social behaviour. In particular, the generation, acquisition and exchange of knowledge, the lifeblood of all firms and commercial sectors, are mediated and reflected in geography. The outcomes of all apparently non-spatial activities are almost always spatial, as are their component elements and processes. In particular, sector-based space-neutral policies with little or no recourse to the regional context may have important spatial implications (Hurter and Martinich, 1989) and that context may also end up being a backdoor but, nevertheless, key element of these policies. As such, the place-based approach perceives the space-neutral sector approach to be inappropriate, in that what are apparently space-neutral policies will always have explicit spatial effects. Moreover, if the spatial aspects of the policy are not carefully considered, then many of these spatial implications will often undermine the aims of the policy itself.
- Second, the place-based approach also focuses on the role played by under-development traps in limiting or inhibiting the growth potential of regions, and emphasises the part which policy can play in the provision of public goods in a manner which is appropriately tailored to the requirements of the region. While the space-neutral approach underlines the role of agglomeration, empirical work by the OECD (Garcilazo *et al.*, 2010) demonstrates that urban regions, rural regions and intermediate regions show no differences in their propensity to outperform, underperform or maintain parity in terms of growth rates with OECD regional averages. This is an important observation because it suggests that the agglomeration assumptions of the World Bank (2008) are overplayed in as much as OECD growth is neither necessarily an urban story, nor are the benefits of agglomeration unlimited. In fact, the evidence suggests that in many advanced OECD countries the benefits of urban scale are actually waning (McCann and Acs, 2011). As such, maps showing localised spikes of productivity confuse correlation with causality (OECD, 2009b).

There are several fundamental problems associated with making a leap from the observation of spatial concentration of activity to that of space-neutral policy settings in all countries. In particular, the place-based approach considers that making this leap

uncovers three major internal contradictions and inconsistencies embedded within the space-neutral approach:

1. Today's World Bank analysis of the policy implications of economic geography is completely at odds with the long-term position advocated by the same organisation over several decades. Observations from many of the world's poorest countries suggest that fundamental a-spatial institutional reforms in many of these countries, as has been long advocated by the World Bank itself, are no guarantee whatsoever of development (Barca and McCann, 2010), precisely because of the complex problems associated with economic geography (Venables, 2010). However, to say that massive urban growth should be encouraged acknowledges precisely the opposite, namely that context really does matter, because if context did not matter, then institutional reforms alone would indeed suffice for growth (Rodríguez-Pose, 2010). Where massive urban growth is recommended by the World Bank, the reason is that massive cities are assumed to be a means to try to solve the problems associated with the generation, acquisition and sharing of knowledge and resources. But this assumption is needed precisely because local institutions do not work properly and cannot reasonably be reformed, due to the entrenched and longstanding self-interests of the major urban-political elites.
2. The spatially-blind approach as embodied in the *2009 World Development Report* assumes that "the state knows best". It presupposes that the state has both the information and knowledge to design, implement and monitor the most adequate a-spatial top-down development strategies through monetary policies, fiscal policies or institutional intervention. But two factors may undermine this presumption:
   - First, the national state lacks a sense of community (Streeck, 1991; Bolton, 1992; Rodríguez-Pose and Storper, 2006; Tabellini, 2010). A sense of community is a critical form of social capital which determines the institutional environment in which development takes place (Streeck, 1991). An absence of this at the national level limits the capacity of national policy makers to generate local consensus and trust between local actors, to resolve any local conflicts and to mobilise local resources (Rodríguez-Pose and Storper, 2006), to determine the optimal provision of local public goods (Tabellini, 2010), and to foster the local willingness to pay for development (Bolton, 1992). The importance of engendering and promoting this type of locally embedded social capital is that it helps to overcome the types of free-rider, rent-seeking and opportunism problems commonplace in the pursuit of development activities (Guiso *et al.*, 2010). The nation-state has little or no capacity to achieve these outcomes, particularly when such policies are designed by the capital city elites.
   - Second, the heterogeneity of place, characterised by the presence of "place-specific market imperfections or externalities" (Bolton, 1992), will weaken the efficiency of spatially blind policies. This "sense of place" is in itself a public good (Bolton, 1992). However, the state has profound limitations in its ability to mobilise local actors due to its lack of local knowledge and its traditional incapacity to adapt its interventions to differences in local institutions. The result of this inability and incapacity is that top-down policies tend to end up being largely the same, with no real regard to local preferences. As such, top-down and place-neutral policies tend to be incapable of responding to the variation in potential across places. As a consequence, untapped local potential often remains exactly that, untapped.

3. The fact that the space-neutral approach assumes that the state knows best is profoundly ironic given that the position of the World Bank for decades has been that the market, and not the state, knows best. Moreover, it is not the state, but the World Bank-advising-the-state, which is presumed to know best. This is questionable at the least, because we know from models of new economic geography and agglomeration that not only are multiple equilibria possible, but we know so little about the transitional dynamics of these models (Thissen and van Oort, 2010) that the predictive empirical power of these models is both very limited and very sensitive to the model specifications (Bosker and Garretsen, 2010).

In marked contrast to these internal contradictions, the place-based approach explicitly acknowledges the limits of the state and does not presume in any way that the "state always knows best". Nor does the place-based approach accept that there is a simple Rostow-Williamson development trajectory applicable in all cases (Barca, 2009). Rather the place-based strategies accept that places differ, both in space and time, and it is the potential offered by these differences which are to be exploited in development policies. In order to ensure this, the place-based approach therefore recognises the need for participation between different levels of governance, what is often termed multi-level governance, as a key enabler of the interventions. This multi-level governance is based on the establishment of open-ended development principles which can then be specifically tailored to places. These types of interventions are designed in order to reflect the different needs and different preferences of local areas and better marshal local resources and potential. The essential feature of these place-based interventions and governance principles is to extract and build upon locally embedded knowledge and institutional capabilities and align incentives so that all stakeholders can co-operate for the common good.

The elements of appropriate regional development policies

The question that emerges from this discussion is therefore not necessarily whether spatially blind or place-based policies are better in order to deal with spatial problems in an increasingly agglomerated world, but whether these policies are as incompatible as it may seem at first sight. Are these policy approaches mutually exclusive or complementary? There is a need to think about growth and development intervention in a way which pulls together the best parts of both approaches, but also takes into consideration the economic, social, political and institutional diversity that may influence policies. This framework would make intervention closer to place-based policies while trying to draw the best from spatially blind approaches, and implies a considerable departure from many current development practices.

In particular, development intervention will possibly have to focus on efficiency and social inclusion rather than on convergence. Efficiency/competitiveness and social inclusion/equity are the two sides of the same coin and, from an economic theory and social and legal justice perspective, they should both be pursued. Development intervention should be based on "proper" development policies and should not become in any way a mere policy for redistribution across regions, as was previously often the case in earlier generations of regional policies (Farole *et al.*, 2011). Assessing development policy solely on the basis of convergence criteria alone therefore makes little or no sense (Rodríguez-Pose and Fratesi, 2004), since convergence does not capture the aimed improvements on either dimension of developments: efficiency and social inclusion. Moreover, an unintended side-effect of adopting criteria which are too far removed from the policy, as was the case with the EU

Cohesion Policy, is that the redistribution of resources according to convergence criteria may have undermined the capacity of development interventions to deliver both greater efficiency and social equality. Development strategies should therefore focus on mechanisms which build on local capabilities and extract local knowledge from public and private actors in the design and delivery of public policies (Rodrik, 2005; OECD, 2009a, 2009b), creating a multi-sector policy framework involving the provision of different bundles of public goods to different localities.

However, in order to avoid the principal-agent problems of opportunism and rent-seeking on the part of the policy-beneficiaries, the success of place-based policies requires that local and regional actors are mobilised as an essential feature of the policy. This approach to policy design is therefore understood very much as a bottom-up approach rather than a top-down approach (OECD, 2009a; OECD, 2009b; Barca, 2009). However, both horizontal and vertical governance arrangements are required to traverse the traditional demarcation lines between local, regional and national government, in a manner which is appropriate for achieving the development objectives, priorities and intended outcomes.

Two essential features which are also required to make the place-based approach work are conditionality and outcome indicators. Conditionality is codified in binding agreements that govern the principles underpinning the relationships between the different levels of governance and policy makers (Barca, 2009). However, in order for such agreements to work it is necessary to move away from a culture of audit and control to a culture of monitoring and evaluation. This is achieved by making clear right from the start what the *ex ante* aims and intended outcomes of the policy are in terms of well-being and socio-economic progress. Indeed, closeness to policy is one of the key features determining which are the most appropriate outcome indicators to be chosen in order to monitor and guide the policy process and to assess whether the policy goals and outcomes have been reached. The principles on which such outcome indicators are to be chosen are discussed in detail in Barca and McCann (2011), "Methodological Note: Outcome Indicators and Targets – Towards a Performance Oriented EU Cohesion Policy" and examples of such indicators are contained in the two complementary notes on outcome indicators for EU2020 entitled, "Meeting Climate Change and Energy Objectives" and "Improving the Conditions for Innovation, Research and Development".[1] Conditionality, outcome indicators, stakeholder engagement, multi-level governance reforms, are all themes which were central to the arguments originally developed in the Barca (2009) and OECD (2009a, 2009b) reports, and which have now been emphasised by the European Commission (2010) proposals for reforming EU Cohesion Policy. Recently there is also evidence that US policy-thinking is also moving very much in a similar direction.[2]

Conclusion

Place-neutral policies may typically end up being capital-city promotion policies, ostensibly because of agglomeration arguments, but in actuality they often end up being so primarily because of the national rent-capturing influence of capital city elites in all areas of public life. As such they are neither space neutral, nor devoid of rent-seeking. Moreover, why such capital-city policies should be promoted is itself questionable. Many core urban centres will grow without the need for significant policy intervention.

This therefore raises the question as to whether development objectives should be shifted from the promotion of efficiency in the core to enhancing the potential for growth and development in every territory. While place-neutral approaches emphasise efficiency in the core, place-based approaches focus on issues of adaptation and transformation to changing conditions in all regions. From a place-based perspective, issues such as convergence are therefore regarded as being an outcome which is too far away from a specific regional development policy to be meaningful. Instead the objective is to tap into untapped potential in all regions in a co-ordinated and systematic way, and the place-based approach argues that this can really only be achieved by taking into consideration the diverse variety of local knowledge, institutional capabilities and competences in different geographical locations which may affect the potential returns of local policy interventions. Importantly, the use of both conditionality and outcome indicators is essential in order to avoid policies drifting into pure context-based strategies, the rents of which then being captured by local elites. This combination of elements will ensure that place-based approaches become the most effective people-centred regional development policies.

Notes

1. See *http://ec.europa.eu/regional_policy/sources/docgener/evaluation/performance_en.htm*.
2. See *www.whitehouse.gov/sites/default/files/omb/assets/memoranda_2010/m10-21.pdf*, *www.whitehouse.gov/blog/2010/06/30/place-based-investments*.

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Building Resilient Regions for Stronger Economies

PART III

Chapter 11

Alternative Approaches to Development Policy: Intersections and Divergences

by
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This chapter concludes the OECD Regional Outlook Policy Forum with an examination of the intersections and divergences between alternative approaches to regional development, paying particular attention to their underlying assumptions about markets and other institutions. The chapter then relates this analysis to the emergence of the OECD's "New Regional Paradigm", as well as to recent developments in regional policy in the European Union, the United States and elsewhere.

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Introduction

In both the developing and developed world it is widely believed that the success of development policies does not depend on the adoption of any "worldwide model" but rather on the adherence to a few sound and ever-evolving principles and on the capacity to monitor thoroughly, debate publicly and adjust continuously policy actions within a stable, credible and long-term framework.

The debate promoted by the OECD is clearly about policy principles. For it to be useful and to provide guidance for daily work on the ground, it should go beyond the reiteration of each side's views and it should get rid of any preposterous divergence between them, such as whether development policy must be aimed at persons or places, whether context matters, and whether agglomeration is a primary source of growth. By highlighting the contribution and the (rather wide) intersection of existing views, the debate should lead to identifying their true (significant) divergences and the assumptions which motivate them. Which in turn is the basis for everyone to choose his/her preferred set of principles. This is the purpose of this chapter.

I shall first suggest that for the debate to advance, the place-based *versus* spatially blind *duello* should be unlocked by identifying five different approaches to development. Having summarised their contribution, their assumptions and their recommendation, I will put forward a group of propositions that captures the intersection of all but one of these approaches while at the same time bringing to light the true divergences between them and some distinct features of the place-based perspective. Finally, I will come back to the *duello* and stress the rationale for, and the consequences of, adopting the place-based perspective. In so doing, I will draw upon both the articles presented in the debate in this forum and from some enlightening contributions to the theory of development.[1] Unquoted reference is also made to the report *An Agenda for a Reform of Cohesion Policy* prepared in 2009 for the European Commission.

Five approaches to development policy

Let's start with the five approaches. Each of them provides a specific contribution to the public debate: moving from first to last, these contributions add up. At the same time, very different policy guidelines are recommended by each view. They can primarily be attributed to different assumptions about knowledge: which agents know what policy actions to take where and how? Four different answers are offered to this question (when addressed): *i)* the state; *ii)* long-established large firms; *iii)* local agents (knowledge embeddedness); *iv)* none of them (knowledge does not pre-exist and it is produced by the interaction of all these agents). Divergences also emerge in the objective of development policy (growth, social inclusion, a mix of them, convergence) and in the assumptions about local elites.

Perfect institutions approach

Its contribution to public debate comes from the argument that good institutions are a primary driver of growth. It moves from this standpoint to give a specific definition of what "good institutions" are: they are thought to be perfect general institutions (in the fields of education, health, law and order, justice, labour markets, water and waste, energy, land, etc.) whose features we have learnt through the history of development. This view assumes that:

- The institutions suitable to economic development are unique and their effectiveness is not context-dependent (personal circumstances are taken into account, independently of context, by built-in mechanisms).
- The state (*i.e.* democratically elected national elites) or an international or supra-national institution (*i.e.* elites appointed by national democratically elected elites) knows what these perfect institutions are.
- No context-based interdependencies exist among these institutions.

Economic efficiency (generally interpreted as the maximisation of national growth) is considered to be the primary or unique objective of development policy, while equity or other social goals tend to be treated as constraints (excessive social tensions disrupting economic growth) or as by-products of growth (a historically determined correlation – Williamson or Kuznets curves – being envisaged between social and economic results). No attention is paid to space, to the spatial allocation of resources or to agglomeration.

Agglomeration-driven approach

This view's contribution to the public debate is the argument that the world is inherently spiky and that agglomeration is a primary driver of growth, as well as the recognition that development requires, together with appropriate institutions, public or publicly governed investments (in education, health, security, justice, water and waste, energy, land, as well as in transport and communication) suited to the agglomeration. Moving from this perspective, the approach argues that, since the state as well as any international or supra-national institution, have a very limited knowledge of the efficient spatial allocation and specific features of these investments, they should be market-driven, *i.e.* public investment decision making should be driven by "private development interests". By doing so, public investments would promote agglomeration processes that in turn would benefit all persons living in lagging regions because these investments would provide them with the opportunity to achieve a better quality of life through migration.

This view can be rationalised by assuming that:

- A unique optimal set of agglomerations exists and market forces can "discover" it through a process of trial and error and steer public investments towards it.[2]
- Market forces are capable to do so because the decisions of long-established large firms – market leaders – result from a balancing of interests and from ongoing negotiations among a multitude of stakeholders (managers, shareholders, workers, clients, residents, etc.), which in turn ensures knowledge extraction, avoids decisions being driven by any particular interest and untangles decision-making complexity over time.

Notice that if either of these two assumptions were to prove false – as suggested by the new economic geography (multiple equilibria) and the most advanced, non-contractarian theory of the firm, as well as by the lessons of the current economic crisis[3] – the agglomeration approach would look like a green light for the state to be captured by particular private interests.

Redistributive approach

This view's contribution, compared to the previous ones, is the argument that agglomeration brings about not only economic efficiency but also social exclusion within the agglomeration boundaries and that it tends to produce, in spite of migration, very large or increasing development gaps between regions, these two tendencies having the power to erode the fabric of society and then hamper development. The view then moves on to focus on the income features of development – intra-regional income inequalities and regional gaps in GDP per capita – and to call for those effects to be compensated by redistributing funds (through public works, incentives to firms, subsidies to people) both to the deprived areas within the agglomeration and to lagging regions.

This policy conclusion is consistent with two very different visions and assumptions:

- **A tough, market-oriented vision.** Those who believe, as in the second approach, in a unique optimal map of agglomeration but also believe that very relevant problems of social exclusion are bound to arise within the agglomerations (under-employment or the invisible economy, organised crime, lack of security, failure of the education system, etc.), or between regions, are concerned that these challenges do not grow so unwieldy as to threaten the agglomerations themselves. They see financial redistribution, or other kinds of "spatially targeted incentives", as being needed "at some point". The same is true for lagging regions, in order for them not to threaten national (or even international) stability.
- **A soft, compassionate vision.** A similar financial redistribution, although on a grander scale, is advocated by those who believe, on the contrary, that the world is potentially flat, *i.e.* that all places have the potential to achieve the same GDP per capita and that this is a reasonable long-term goal. From their point of view the social objective (and the connected preoccupation not to let the fabric of society being eroded) coincides with the economic objective of promoting growth. Financial redistribution is seen as a way to promote convergence of GDP per capita across regions and achieve both objectives at once.

Whatever vision is supporting this approach, it presents two distinct features. First, there is no particular concern for the rent-seeking activities that redistribution tends to enhance. Second, there is no focus on the issue of knowledge: which agents in the region (or community), if any, or other actors, are competent and capable of making use of those transfers. In the market-oriented version, these two features are justified by the fact that redistribution is clearly conceived as a tool to achieve "social peace", which is expected to be guaranteed by regional elites (or, within an agglomeration, by community elites) whose loyalty is bought by allowing them permanent rents. No real concern exists about how the resources are actually used. In the compassionate version, the assumption is that local elites are both benevolent and competent. The redistributive view, in both its versions, is pre-eminent today in the support for large transfers of funds to lagging regions under the European Union Cohesion Policy. The compassionate version manifests itself in the choice

of "convergence" as a policy objective for lagging regions. The market-oriented version is reflected by the resistance within the European Commission to the idea of putting forward more binding rules against rent-seeking.

Communitarian approach

The Communitarian (or local) approach's contribution to the debate on development policy comes from its argument that local agents' awareness of their own knowledge and preferences is a primary driver of development – both of its economic and social dimensions, and both in the deprived areas of agglomerations and in lagging regions. The approach moves on from this awareness to argue that policy actions should be the result of a local deliberative process, where the role of external agents (the state or an international or supra-national organisation) is limited to promoting the conditions for this process to take place. This view makes no assumptions on whether the world tends to be flat or spiky, although it is concerned about the negative effect of agglomeration. It assumes that:

- Context influences both the needs to be addressed and the effectiveness of institutions and investments.
- Most knowledge on institutional design and investments pre-exists and is embedded in a multitude of local agents, while a strict adherence to local values is a necessary prerequisite for development to take place.

Therefore, the knowledge contribution to development by external agents is about how to trigger a "self-discovery process" to extract and aggregate local knowledge, not about what to do and how. At the same time, risk of rent-seeking by existing elites is strongly perceived and this leads either to rejecting financial transfers (except for capacity building) or to advocating a pervasive process of monitoring and evaluation when financial transfers are significant.

Place-based approach

The contribution of this approach, together with the explicit emphasis on the role of contexts, comes from the argument that innovation (new knowledge) is a primary driver of development – essential for the other drivers – and that tailor-made institutions and integrated public investments must be designed through the interaction of agents both endogenous and exogenous to places. Both reducing the underutilisation of resources and promoting social inclusion are the objectives of this approach; social inclusion is defined as the share of people above a socially acceptable – and therefore ever-changing – standard in the multiple dimensions of their well-being, the process through which this result is achieved being participatory and fair. The assumptions of the place-based approach are:

- Institutions are not unique and context influences both the needs to be addressed and the effectiveness of institutions and investments in meeting those needs.
- Strong interdependence exists among institutions and investments, which calls for them to be designed in an integrated way.
- Most of the knowledge needed to tailor institutions and investments to context does not pre-exist – whether held by the state, the large corporations or local agents – but must be produced through a deliberative process involving all those actors, both exogenous and endogenous to specific places.
- Local values are important but development also requires openness to values from outside (Adam Smith's and Amartya Sen's "view from nowhere").

- Under-development traps result from local elites being incapable (capacity being path-dependent), unwilling (their aim being to maximise their own share of a given output) or insufficient (centripetal flows of capital and labour occurring due to agglomeration effects) to deliver the appropriate institutions and investments, which calls for an exogenous intervention to promote endogenous change.

As a result of these assumptions, the place-based approach advocates policy actions that:

- Not only take spatial context into account intentionally and explicitly.
- Nor just design an integrated multi-sector bundle of institutions and investments that addresses different dimensions of well-being at the same time.
- But do so by applying a combination of endogenous and exogenous forces – the exogenous action being needed to bring information and values from "outside" and change the balance of bargaining power within places – where the conflict between endogenous and exogenous forces is accounted for and governed through appropriate multi-level governance tools.

In the specific case of the European Union, the place-based approach today calls for a radical reform of Cohesion Policy, overcoming the deficiencies produced, compared to Jacques Delors' vision, by the hegemony of the redistributive approach in both of its versions.

Identifying intersections and divergences to fashion a way forward

Once the five approaches that lie behind the current debate have been decoded, it is possible to take some steps forward. This can first be done by identifying the intersection of all views except for the redistributive one. This intersection, which turns out to be remarkably wide, is summarised in what follows under seven propositions (quotation marks are used when the proposition comes from one of the papers promoted by the OECD). These propositions get rid of some false differences that prevent the current debate from being useful to policy making. Each proposition is also used to identify the relevant features of the real disagreement among the four non-redistributive approaches. This exercise will make clear how the place-based approach stands out compared to the others.

1. **"Prosperity does not come to every place at once, and to some places it does not come at all."** Very few (except those predicting a flat world) would disagree. But development is not about a zero-sum alternative between prosperity and doom. Some policy makers – namely the proponents of the place-based approach – would argue that most places can contribute to growth – as data produced for this forum show – through a higher utilisation of their potential output. Moreover, since no public or private organisation has adequate *ex ante* knowledge about which places have a higher potential for growth, whether a given agglomeration is approaching its efficient limits, or how costly it will be to bring a lagging region closer to its potential, development policy should let alternative policy options aimed at different places compete transparently among themselves. This is why an overall place-based strategy is needed, as opposed to a blind reliance on either the choices of a few large corporations or on the judgements of some top bureaucrats or top experts.
2. **A high disparity of productivity and per capita income between places is likely to be persistent, *i.e.* convergence of per capita income of places is not an appropriate objective for development policy.** This proposition follows from the first one and is widely agreed upon, once again with the exception of those predicting a flat world. But, a high disparity could signal the failure of some places to tap into their growth potential

and should therefore call for policy scrutiny. Furthermore, when a high per capita income disparity persists between places of the same nation (or Federation, or Union) with different cultural, historical or ethnical identities, it might well erode the fabric of society of that nation (or Federation or Union), as it is correctly perceived by both the redistributive and the place-based approach. Finally, reducing poverty or, more generally, improving social inclusion (as previously defined) within and between places is as reasonable and relevant an objective of development policy – in the framework of both Rawls's and Sen's theory of justice – as promoting growth.

3. **Agglomeration economies are a primary driver of growth.** "**It is extremely unlikely that policies deliberately designed to reduce the benefits of agglomeration economies in one city will help others.**" Widespread agreement on this position exists, since none of the approaches – except, in some versions, the compassionate version of the redistributive approach – is "anti-urban". But the agreement leaves plenty of room to argue that agglomerations can arise not only in mega-cities but in networks of intermediate cities. It also leaves room to argue that agglomerations (especially those of mega-cities) encounter negative as well as positive externalities and produce social exclusion within their boundaries, and that neither of these two phenomena can be *ex ante* predicted. Moreover, it is the case that the state's direct investments in primary cities – a very space-oriented intervention often disguised as "place-blind" – play a fundamental role in the development of agglomerations (they "often dwarf the amount of subsidies provided to politically less important regions"): therefore, their return in terms of the public interest (both in its economic and social dimensions) should be assessed in comparison with all the other explicitly space-oriented interventions in non-primary cities and regions.
4. **People's well-being, not the well-being of any given place, should be the target of development policy.** Even the proponents of the redistributive approach would agree with this proposition: any attempt to read the current debate as if some approaches were concerned with persons and others were concerned with places is preposterous. The issue at stake is different. Some approaches – namely the place-based and communitarian ones – argue that the well-being of each person, given all its individual characteristics, also depends on the context in which he/she lives. They also argue that addressing a person's well-being and designing the appropriate institutions to do so require taking context into account. Finally, they point to the fact that since no deterministic correlation exists between equity and growth (no Williamson or Kutznets curves have actually been proved to exist), addressing people's well-being requires taking care of both growth and social inclusion, with reference to a given place.
5. **Attempts to reduce social exclusion within cities by "moving people about or providing local jobs or renovating buildings" are unlikely to lead to any result.** Independently of any assumption on how far deprived "neighbourhoods, independently of people's characteristics, reduce their prospect or systematically worsen their lives", this proposition squares with a very high mobility of labour and residence and low commuting costs within cities and with the marked response of land and housing prices to all features of location. But the proponents of the communitarian and place-based approach would argue that the proposition also underlines how ineffective any intervention is when it is top-down and not based on the knowledge and preferences of the people living in the deprived neighbourhoods. They would also argue that a strong case exists for place-tailored interventions aimed at providing public services

(education, health, child and elderly care, etc.) in those neighbourhoods of a quality similar or higher than in other neighbourhoods and shaped to their specific needs (preventing the market-driven tendency of the public sector to do exactly the opposite, *i.e.* to respond more promptly to the "voice" of rich neighbourhoods). Indeed, they would argue that even a top-down initiative for urban renewal of stressed neighbourhoods could actually have a positive impact on the original residents if they were given the opportunity to benefit from the capital gains arising from rising land and house prices due to the renewal itself (which would then act as a source of "original accumulation of capital"). Finally, they would argue that any fascination with the advantages that would accrue to people from sharing their neighbourhood with people of the same social status or condition should be rejected as unproved, based on questionable categorisations of people's identity, as well as a source of "communitarian confinement".

6. **In lagging regions (particularly in persistently lagging regions such as the Italian *Mezzogiorno*) it is "futile to provide economic incentives for staying and striving in those regions" or "highways, railroads, airports", while the primary instrument should be the "improvement of basic institutions and of essential services".** All approaches – once again, except for the redistributive one – converge on this proposition. The disagreement concerns how to deliver these institutions and how to improve essential services. According to the perfect institution approach, a unique model exists that should be implemented with no reference to place. According to the agglomeration-driven approach, it would be up to "private development interests" to lead the way. According to the place-based approach, basic institutions and essential services need to be tailored to place, and tailoring requires multi-level governance involving both exogenous institutions (State, international organisation or supra-national institutions such as the European Commission) and endogenous agents (belonging to the place). The latter is the approach adopted for a limited share (5%) of total public spending in the Italian *Mezzogiorno* after the failure of the redistributive approach of the previous three decades. The Bank of Italy Research Centre, after investigating the results of this policy and observing that it has fallen short of expectations, concluded that for results to be achieved the whole of public spending in the *Mezzogiorno* should take into account its specific territorial features: "homogeneous public policies tend to produce", Bank of Italy Governor Mario Draghi wrote, "different effects according to the quality of administrations and territorial contexts".[4] In other words, "place-based-ness" should not constitute an attribute of some residual policy – called "regional" – that is juxtaposed to traditional sector-based policies, but should be a feature of all development policies financed by the public budget.

7. **"Migration is a measure of the desire of people to improve their lives and those of their children", and policies aimed at holding people back in places by compensating for the higher capital cost of doing business there or by other subsidies are inappropriate.** Except for those supporting the redistribution approach, all would agree with this proposition, once note is taken of the opportunities that migration offers both to migrants and their families (although the need to prevent major and disruptive moves of masses of people to crowded and badly managed mega-cities might call for temporary measures aimed at preventing people from moving, while better and more sustainable policies are being designed). But it is equally inappropriate and even more odious to induce people with no choice to migrate through "market-driven" public policies that encourage the swelling of mega-cities without *ex ante* addressing the issue of migrants' social inclusion. These inducements actually count on and exploit the fact that these

migrants do not have a choice. Rather, development policy should give people in all places – through education, democratic participation in decision making, decent housing, provision of water, care of children and the elderly – the opportunity to assess whether they want to stay or move. This is what the place-based approach advocates.

Conclusion

By identifying a wide range of common elements within the different policy approaches to development, the issues on which the place-based approach stands apart come to light. The specificity of this approach does not lay in the idea that "place (context) matters", a feature common to all approaches but one. Nor it does lay in a presumed anti-agglomeration and anti-mobility drive, since it shares with the agglomeration-driven approach a belief in the primary role of agglomeration for economic growth and it considers mobility a freedom to be guaranteed to people: including the freedom to move, the freedom not to move and the freedom (the capability) to decide whether to move or not to move – a feature largely ignored by the agglomeration-driven approach. The specificity of the place-based approach relates rather to the hypotheses concerning knowledge and local elites. First, the place-based approach argues that no actor knows in advance "what should be done". It posits that sensible and reasonable decisions can emerge as the innovative result of a process of interaction and even conflict between endogenous and exogenous forces, *i.e.* between the knowledge embedded in a place and external knowledge. In conjunction with this assumption, it also stresses the role played in producing under-development by the failure on the part of local elites, even when democratically elected, and their innate tendency to seek rents from public interventions. For these two reasons the place-based approach, while sharing with the communitarian approach the emphasis on the knowledge, preferences and values of local agents, assigns a much greater role to exogenous institutions – their knowledge, preferences and values – and therefore advocates multi-level governance.

But what about the so-called spatially blind or a-spatial perspective put forward by the *2009 World Bank Development Report* (WDR)? It turns out that this perspective is a combination of the perfect institution, the agglomeration-driven and the redistributive (in the market-driven version) approaches. Nation-wide homogeneous institutional reforms according to an established blueprint constitute a pillar of the 2009 WDR strategy; but a similarly central role is also played by public investment in agglomerations (driven by "private development interests"); while it is also argued that these actions might have to be followed by incentives and subsidies both to lagging regions (to attract business) and to distressed areas within agglomerations (to limit social disruption). Each arm of this strategy relies on different assumptions. With reference to space and the role of context, the 2009 WDR strategy assumes context independence for institutions and context dependence for investments and incentives: it is then spatially blind only in the first of its three pillars, while for the agglomeration pillar only the reliance on the choices of large private concerns is "blind". With reference to the issue of knowledge – who knows what actions to take where and how? – it assumes that the public sector is very knowledgeable in the design of institutions, but very ignorant in designing public investments, the issue of knowledge not being relevant in the redistributive arm.

In the *duello* between the place-based approach and the 2009 WDR strategy the real issue at stake is then not the attention *de facto* paid to space. It is rather the assumptions about knowledge and local elites. Knowledge is treated as innovation by the place-based

approach, while a mix of different views is held by the 2009 WDR strategy. As for internal elites, their failures, role and change are central in the first approach, while being largely ignored in the other. Transfers of resources to lagging regions are seen by the place-based approach as a way to promote institutional and, when needed, elite change within a region, these being the conditions for regions to increase both the utilisation of potential output and social inclusion. Unlike all other approaches – except for the communitarian one – the option of local elites to capture any form of public spending for their own particular interests, extracting a rent from their position without introducing any innovation, is considered as a physiological feature – not a pathology – of any development policy, to be addressed by policy governance.

Policy governance is entrusted then by the place-based approach with three tasks: committing local elites to tailor-made institutional changes coherent with general principles set exogenously by the agency running the policy; creating room for an intense and even inflamed endogenous public debate, where individuals and groups inside and outside established elites have a chance to voice their ideas and dissent and promote innovation; establishing and using a monitoring and evaluation system, based on widely agreed-upon outcome indicators, through which this public debate can be supported and steered. These are the mechanisms through which endogenous and exogenous forces operationally interact, where development policies win or fail, and to which most attention and work should be dedicated once the policy principles have been agreed upon.

The place-based approach is the "new paradigm" of regional policy, as opposed to the "old paradigm" – the redistributive approach in its compassionate version. It is the new paradigm that the OECD has been promoting for some years by re-launching and developing some ideas originating in the 1950s. It is the approach to which several countries including the United States are increasingly looking as a driver for growth. It is the approach that could rescue the European Union's Cohesion Policy from ineffectiveness and decline should the reform announced by the *European Commission's 5th Cohesion Report* indeed be carried out.

Notes

1. See in particular Acemoglu (2009); Acemoglu and Johnson (2006); Aghion and Durlauf (2005); Atkinson and Brandolini (2008); Bourguignon, Ferreira and Walton (2007); Caglar (2005); Dorf and Sabel (1998); Hart and Moore (1990); Krugman (1995); North (1990); Rodrik (2005, 2010); Sen (1999, 2009).
2. It is often assumed that this map is made of mega-cities, and that the same or a greater level of efficiency cannot be achieved by networks of intermediate-size cities.
3. "Our faith in long-established large firms … may now have suffered the death blow", as Acemoglou (2009) wrote with reference to the "self-monitoring capabilities" of those organisations.
4. M. Draghi, *Il Mezzogiorno e la politica economica dell'Italia*, Banca d'Italia – Eurosystem, November 2009 (my translation).

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PART IV

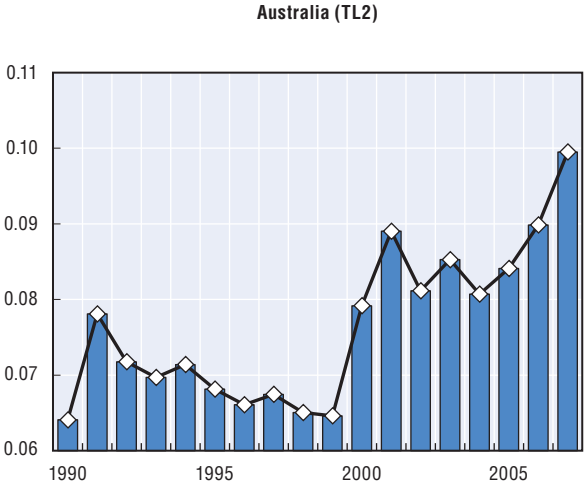
Country Notes

Part IV presents a country profile for each OECD member country describing their sub-national level administrative structure, regional policies and institutional settings, trends in concentration and inequality, as well as how the performances of regions influence these trends, and the contribution of regions to national growth. The country notes also provide basic information such as the number of regions in each regional tier, the share of population living in predominantly urban, intermediate and predominantly rural regions and aerial land. The unit of analysis is at TL3 for examining the level and trends of concentration in order to capture more variation at the smaller regional scale. In contrast, the analysis measuring trends in inequality is carried at TL2 for data purposes given that a longer time series is available at this level.

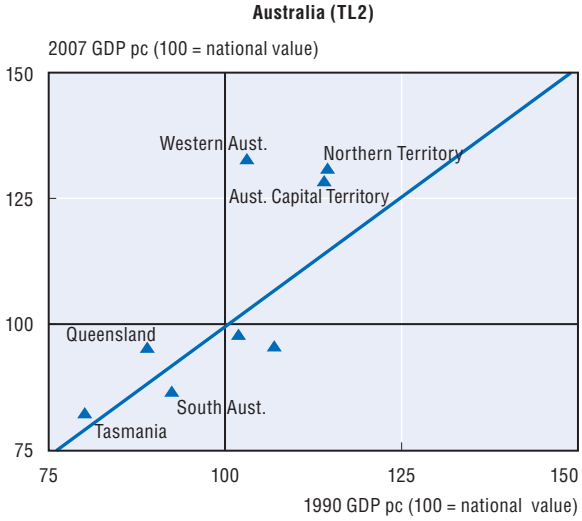
Australia

Population and territory	● 21 million inhabitants (2007), 7.7 million km^2.
Administrative structure	● Federal country. ● Two-tiered sub-national system: ❖ TL2: Six states and two territories (Australian Capital Territory, Northern Territory). ❖ TL3: 58 statistical divisions, among which 6 predominantly urban regions (57% of total population, +0.5 percentage point over the past 15 years), 13 intermediate regions (21%, +0.7 pp), and 41 predominantly rural regions (22%, –1.2 pp). ❖ 565 local governing bodies.
Share of sub-national government in total spending/revenues	● Spending: 37% (2009). ● Revenues: 39.3% (2009).
Concentration and inequalities	● Australia's economy is significantly concentrated. Approximately 60% of the national GDP is produced by two TL2 regions (New South Wales and Victoria), and almost 40% of the national population live in two TL3 regions (Sydney and Melbourne). ● Inequality in GDP per capita among TL2 regions increased from 1990 to 2007. Although inequality declined between 1991 and 1999, it has been steadily increasing since the year 2000. ● The increase is mainly driven by the strong performance of Northern Territory, Western Australia and Australia Capital Territory. These three regions improved their high levels of GDP per capita (relative to national average) during the past two decades, displaying growth rates in GDP per capita of 3.8%, 2.7% and 2.5% respectively. Due to the small size of Northern Territory and Australia Capital Territory, their combined contribution to national growth during 1995-2005 was below 4%. ● In contrast, national growth is mainly led by New South Wales, contributing to more than a third of national growth (32%) during 1995-2005, followed by Victoria (22%), Queensland (22%) and Western Australia (13%). ● Among lagging regions, Queensland has been catching up to national standards in its level of GDP per capita during the past two decades. South Australia has worsened its position and Tasmania's GDP per capita still remains around 80% of the national average.
Key challenges	● Maximising community economic and social development given a range of challenges, including long-term demographic and structural changes, environmental constraints, globalisation and significant economic and social diversity within and between Australia's regions.
Objectives of regional policy	● Regional communities improving their economic, social, cultural and environmental well-being by fully developing regional potential through the delivery of better services for communities, investing in economic and social infrastructure, and promoting innovation for industries to help them grow, adapt and prosper.
Legal/institutional framework for regional policy	● State- and Territory-level regional policy making.
Urban policy framework	● Improving Future Strategic Planning of Capital Cities (through the Council of Australian Governments Cities Taskforce and the Major Cities Unit within Infrastructure Australia).
Rural policy framework	● Supporting stronger, more sustainable rural and regional communities across Australia.
Major regional policy tools	● National programmes addressing regional priorities. ● Regional-specific programmes. ● Council of Australian Government National Partnership Initiatives. ● Regional Development Australia (RDA).
Policy co-ordination at central level	● The Department of Infrastructure, Transport, Regional Development and Local Government.
Multi-level governance between national and sub-national levels	● Joint representation of RDA.
Future orientations of regional policy	–

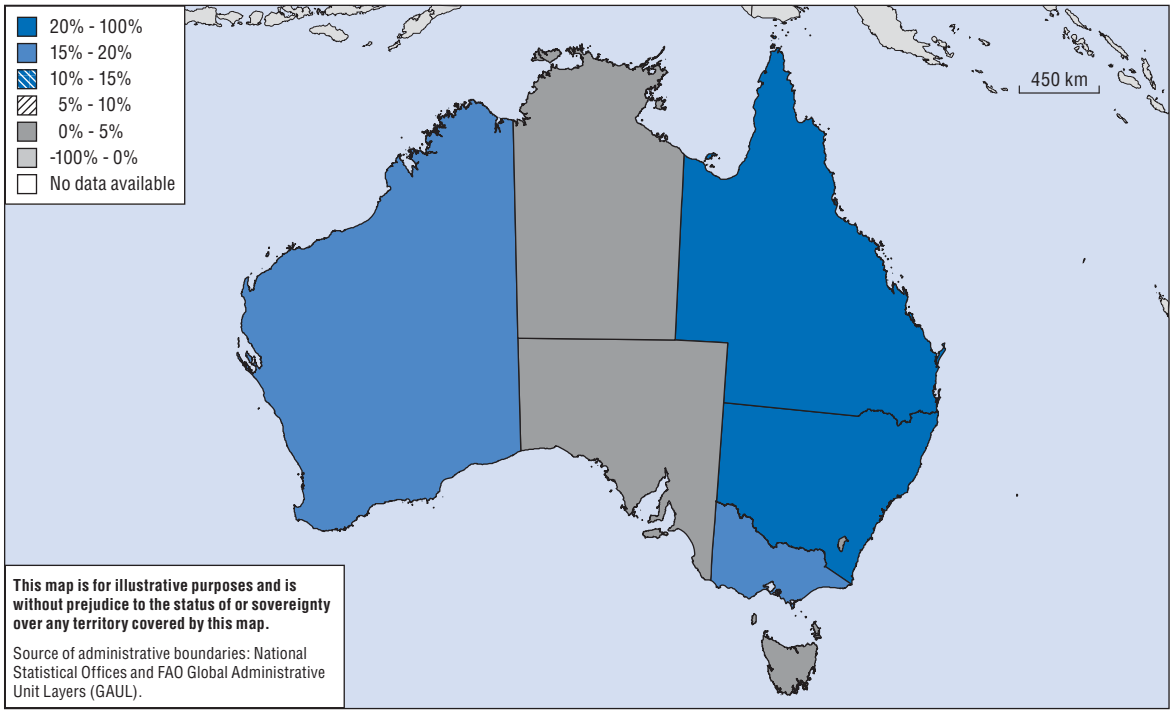
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on *OECD Regional Database* (2009).

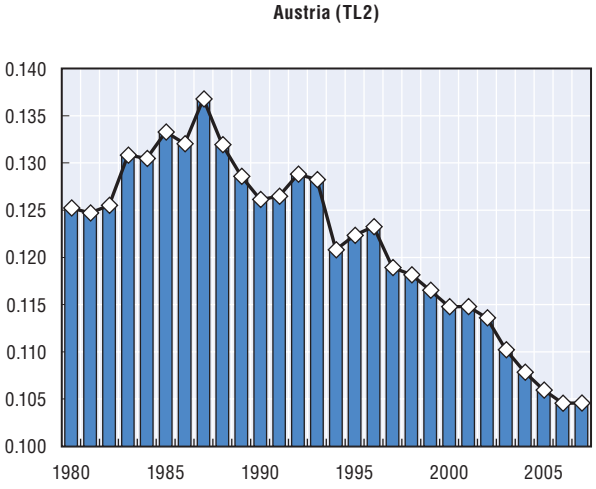
StatLink http://dx.doi.org/10.1787/888932521049

Austria

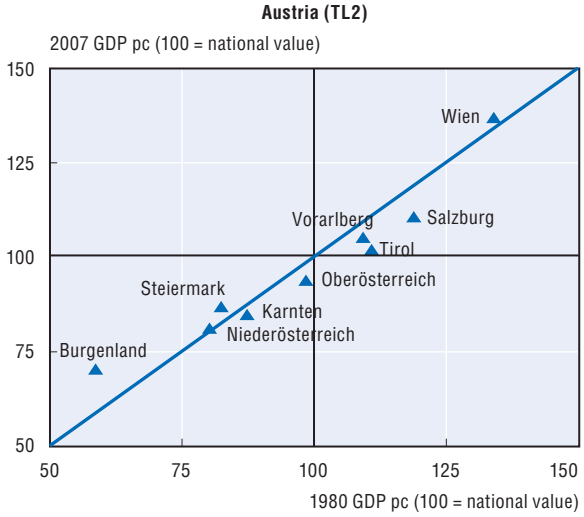
Population and territory	● 8.3 million inhabitants (2007), 83 844 km^2.
Administrative structure	● Federal country. ● Two-tiered sub-national system: ❖ TL2: 9 states or provinces (*Bundesländer*), which are subdivided into *Bezirke*. ❖ TL3: 35 *Gruppen von Politischen Bezirke*, among which only 2 predominantly urban (23% of total population, more or less constant over the past 25 years), 8 intermediate (31%, +0.3 pp), and 25 predominantly rural regions (46%, –0.3 pp). ❖ Among the 2 357 municipalities (*Gemeinden*), there are 15 statutory cities (*Statutarstädte*), 197 towns (*Stadtgemeinden*), 755 markets (*Marktgemeinden*) and 1390 villages (*Dörfer*). Vienna has a special status as both municipality and a state.
Share of sub-national government in total spending/revenues	● Spending: 31.4% (2009). ● Revenues: 24.7% (2009).
Concentration and inequalities	● Economic activity is more concentrated in Austria than on average in OECD countries. Only 10% of Austrian TL3 regions produce 44% of national GDP as opposed to 38% in OECD countries. ● Inequality in GDP per capita between Austria's TL2 regions has declined over the last 25 years. Although inequality first increased and then fluctuated during the years 1980-92, it has been steadily declining during the past 14 years. The catching up process of the lagging region Burgenland, which displayed the highest growth in GDP per capita (1.8%) during the past decade, has contributed to the decline in inequality. In contrast, Austria's largest region Wien (measured by GDP size) has performed below its growth potential, recording the lowest growth rate in GDP per capita (0.5%) during 1995-2005. Despite the low growth rate, Wien contributes a significant share (25%) of Austria's national growth. ● Austria's second largest region Oberösterreich displayed the third highest GDP per capita growth rate (1.4%) during the past decade, as opposed to Niederösterreich, Austria's third largest region, recording the second lowest GDP per capita growth rate (0.7%). Oberösterreich contributed a higher share (18.4%) of the overall growth than Niederösterreich (12.3%) during the past decade. ● Over the past 27 years, Salzburg and Tirol, two regions with GDP per capita levels above the national standard, have lost competitiveness relative to the other regions. In contrast, Steirmark has improved its relative position.
Key challenges	● Urban-periphery disparities.
Objectives of regional policy	● Increase regional economic competitiveness. ● Growth path that contributes to balanced and sustainable development.
Legal/institutional framework for regional policy[1]	● *Land* level regional policy making. ● Multi-lateral and bilateral agreements between the Federation and the *Länder*.
Urban policy framework	–
Rural policy framework[2]	–
Major regional policy tools	● Multi-lateral and bilateral agreements between the Federation and the *Länder*. ● Regional impulse centres. ● ERP loans. ● Aid scheme to support young entrepreneurs and innovation in SMEs.
Policy co-ordination at central level	● Co-ordination of the Federal Chancellery (BKA). ● Joint representation of the Austrian Conference on Spatial Planning (ÖROK). ● Multi-lateral and bilateral agreements between the Federation and the *Länder*.
Multi-level governance between national and sub-national levels	● Co-ordination of the BKA. ● Joint representation of the ÖROK. ● Multi-lateral and bilateral agreements between the Federation and the *Länder*.
Policy co-ordination at regional level (cross-sectoral)	● Regional management office.
Policy co-ordination at regional level (geographic)	● Micro-regions.
Evaluation and monitoring	● Framework of EU Cohesion Policy.
Future orientations of regional policy	–

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

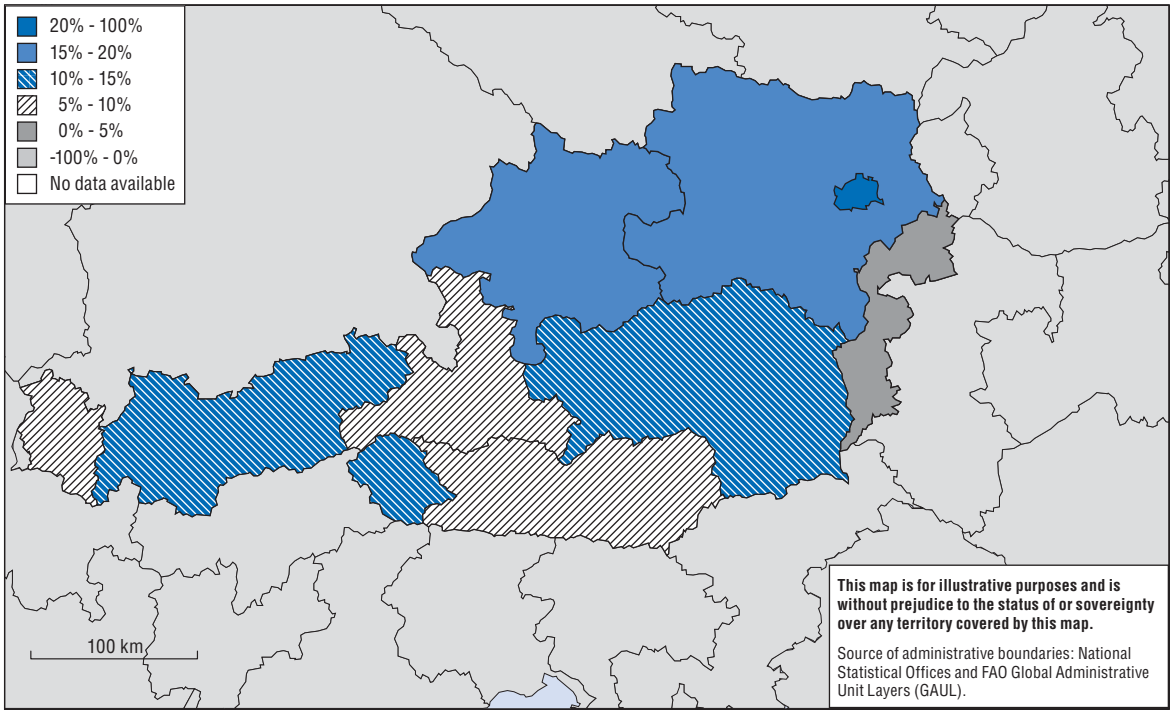
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

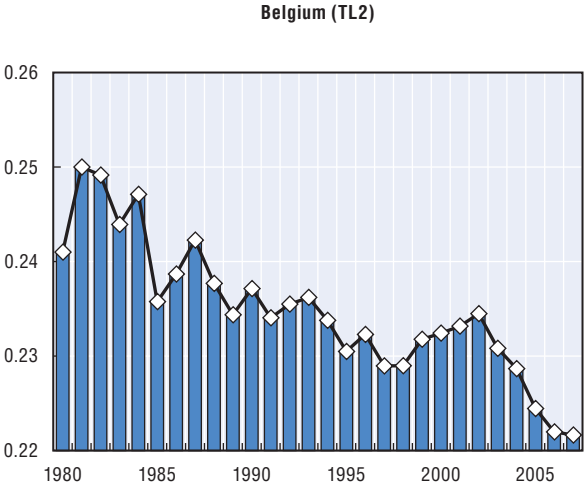
StatLink http://dx.doi.org/10.1787/888932521068

Belgium

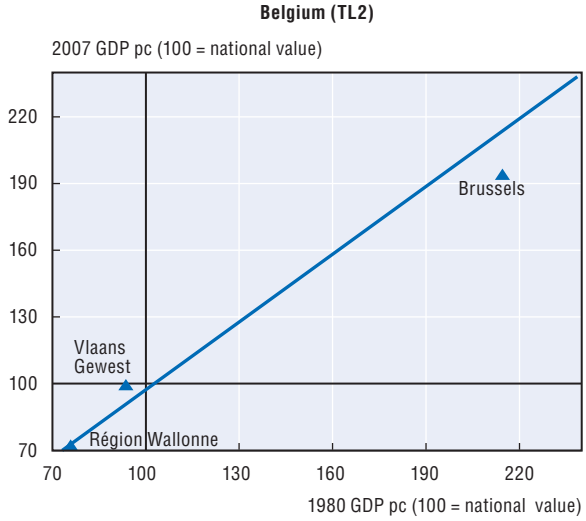
Population and territory	● 10.6 million inhabitants (2008), 30 328 km^2 (second smallest country in the OECD).
Administrative structure	● Federal country. ● Three-tiered sub-national system: ❖ TL2: 3 communities and 3 regions. ❖ TL3: 11 provinces, among which 8 predominantly urban (83% of total population, –0.2 pp over the past 25 years), 2 intermediate (14%, remained unchanged), and 1 predominantly rural region (Province Luxembourg, 2%, +0.2 pp). ❖ 589 municipalities among which 133 have the title of "city".
Share of sub-national government in total spending/revenues	● Spending: 36.6% (2009). ● Revenues: 16.4% (2009).
Concentration and inequalities	● Belgium has the fourth lowest geographic concentration of GDP and of population in the OECD. No single TL3 region produces more than 20% of the national GDP. ● Inequality has declined over the past 25 years and especially during the past 6 years. This decline is mainly driven by a caching up process of the region Vlaams Gewest, which recorded the highest growth rate in GDP per capita among Belgium's three TL2 regions over the past decade. ● As a result of the strong performance, GDP per capita in Vlaams Gewest caught up from 7% lower than national average in 1980 to national standards in 2007. The relative decline of the region Brussels has also contributed to the decline in inequality. ● Due to the large size (measured by GDP share) of Vlaams Gewest and its high growth rate in GDP per capita (1%) during the past decade, it has contributed to more than 60% (61.1%) of national GDP growth during the past decade. Brussels' contribution stood at 20.2% and the Region Wallonne contributed to 18.7% of national growth.
Key challenges	● Insufficient entrepreneurship, creativity and job creation (Flanders). ● Decline of industrial areas (Wallonia). ● Inter-regional disparities.
Objectives of regional policy	● Focus on economic dynamism in Flanders. ● Shift towards higher value-added activities in Wallonia. ● Sustainability in all three regions.
Legal/institutional framework for regional policy[1]	● Regional level regional policy making. ● Flanders in Action and the following Pact 2020 in Flanders. ● Marshall Plan 1 and 2 in Wallonia.
Urban policy framework	–
Rural policy framework[2]	–
Major regional policy tools	● Industrial estate regeneration in Flanders. ● Competitiveness poles in Wallonia.
Policy co-ordination at central level	● None.
Multi-level governance between national and sub-national levels	● None.
Policy co-ordination at regional level (cross-sectoral)	● Better governance policy, Socio-Economic Council in Flanders. ● Marshall Plan 1 and 2 in Wallonia. ● Merger of ministries in Wallonia.
Policy co-ordination at regional level (geographic)	–
Evaluation and monitoring	● Regulatory impact analysis in Flanders. ● *Ad hoc* policy evaluations in all three regions. ● Mid-term and final assessment of the Marshall Plan 1.
Future orientations of regional policy	–

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

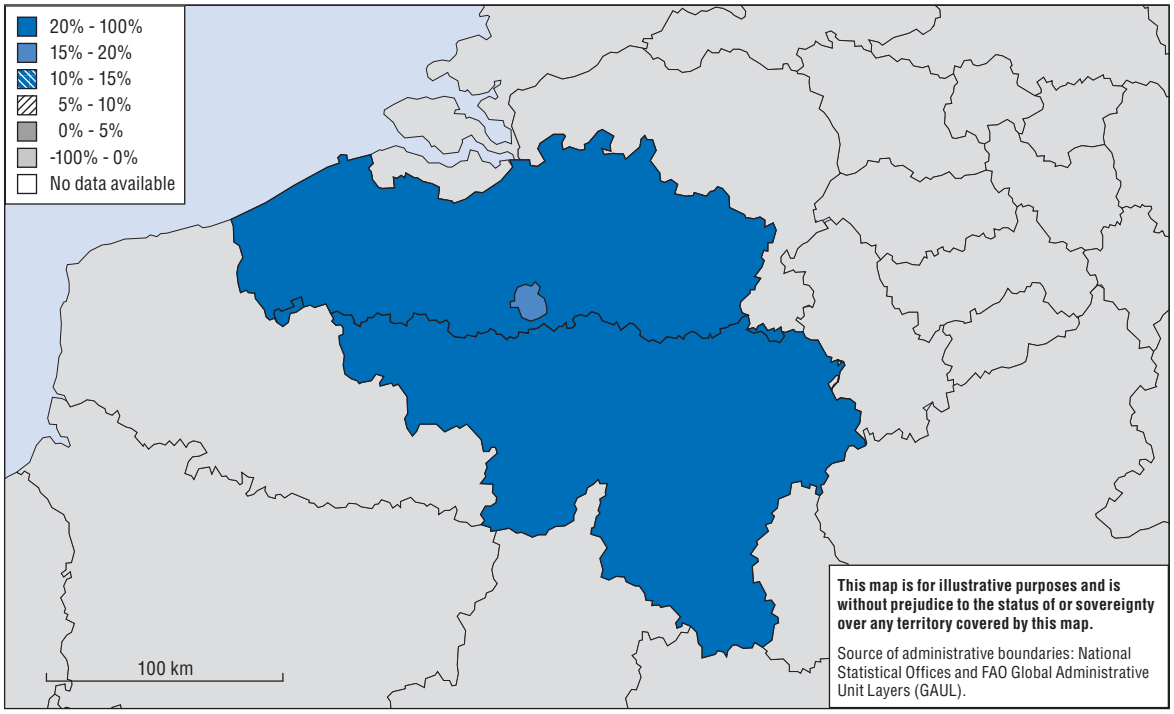
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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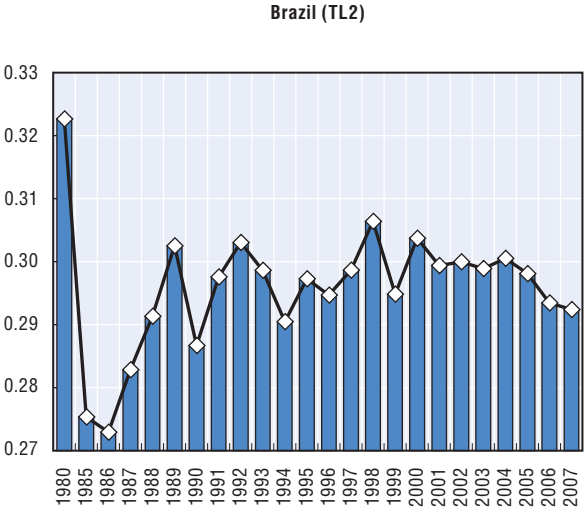
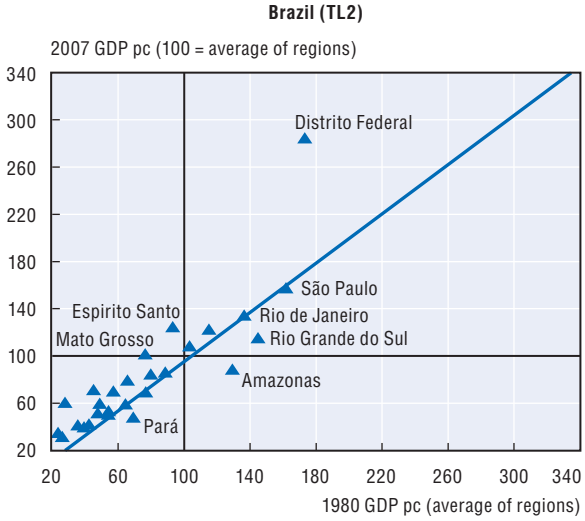
Brazil

Population and territory	● 191 million inhabitants (2007), 8.5 million km^2.
Administrative structure	● Federal country: ❖ 5 statistical regions (*regiões*). ❖ TL2: 27 states (*Estados*). ❖ TL3: 137 *mesorregiões*, among which 8 are predominantly urban (26.3% of total population in 2010), 27 are intermediate (23.6%) and 102 are predominantly rural (50.1%). ❖ 557 *microrregiões*. ❖ 5 592 municipalities.
Share of sub-national government in total spending/revenues	● Spending: 55.5%. ● Revenues: 58%.
Concentration and inequalities	● Although Brazil's concentration index is amongst the highest in the OECD, it has been gradually decreasing over the past two decades and in particular since the 1990s during Brazil's expansionary period. According to the geographic concentration index, Brazil is the most concentrated economy in the OECD area (61.7), surpassing the OECD average value almost by twice and the second most concentrated economy (Sweden) significantly. The TL2 region Sao Paolo alone is home to 21% of the national population in 2008 and produces 34% of GDP in 2007. ● Inequality in GDP per capita among Brazilian TL2 regions surpasses OECD standards. In 2007 GDP per capita in its leading capital region Distrito Federal (USD 28 594) was more than three times higher than the national average (USD 10 038); in contrast, in the lagging region Piauí (USD 3 199) GDP per capita was approximately one third of the national average. The Gini index of inequality in GDP per capita – measuring inequality among Brazilian TL2 regions (Estados) – Third highest (0.30) when compared to OECD countries in 2007. ● Inequality in Brazil is driven by two main forces: its leading region outperforming the rest and lagging regions in the Nordeste trailing behind. Brazil's capital region Distrito Federal increased its GDP per capita from 73% above the national value in 1980 to almost three times (*i.e.* 285%) above the national average in 2007. In contrast, lagging regions in the Nordeste were approximately on average 50% of the national average in 1980 and 27 years later they still remain in similar range values. ● São Paolo is the TL2 region with the largest contribution to national growth over the period 1980-2007, contributing to approximately one third of aggregate growth, followed by nine regions (Minas Gerais, Rio de Janeiro, Paraná, Distrito Federal, Rio Grande do Sul, Santa Catarina, Bahia, Goiás and Espírito Santo) which contribute to almost half of national growth (*i.e.* 49.3%). The remaining 17 regions (or 62% of them) contributed to 20% of aggregate growth.
Key challenges	● Social and productive inclusion of marginal and poor areas.
Objectives of regional policy	● Targeted support to specific regions facing major production development and social inclusion challenges.
Legal/institutional framework for regional policy	● National Policy for Regional Development (PNDR) adopted in 2007.
Urban policy framework	● Various plans elaborated by the Ministry of Cities.
Rural policy framework	● Territories of Citizenship (*Territórios das Cidadanías*).
Major regional policy tools	● Constitutional Funds (FCO, FNE, FNO) and Federal Budget (OGU,*Orçamento Geral da União*). ● Major financing comes from some infrastructure investments (PAC1 and 2); and major horizontal programmes (Bolsa Familia, Minha Casa Minha Vida, etc.).
Policy co-ordination at central level	● Ministry for National Integration (MIN).
Multi-level governance between national and sub-national levels	● Agreements (*Convenios*), not binding. ● Federative pacts ("*pactos federativos*"), usually associated with plans and funds. ● Co-ordination bodies such as the Sub-secretariat for Federal Issues (*Subchefía de Asuntos Federativos*) or the Federal Co-ordination Committee (*Comitê de Articulação Federativa*).
Policy co-ordination at regional level	● Re-created regional development agencies (SUDENE, SUDAM and SUDECO). ● Territories of Citizenship. ● Inter-municipal consortia. ● Regional forums of state governors such as the Forum of the Governors of the North-East.
Evaluation and monitoring	● Federal Audit Authority (TCU, Tribunal de Contas da União).
Future orientations of regional policy	● Proposal to create a National Fund for Regional Development.

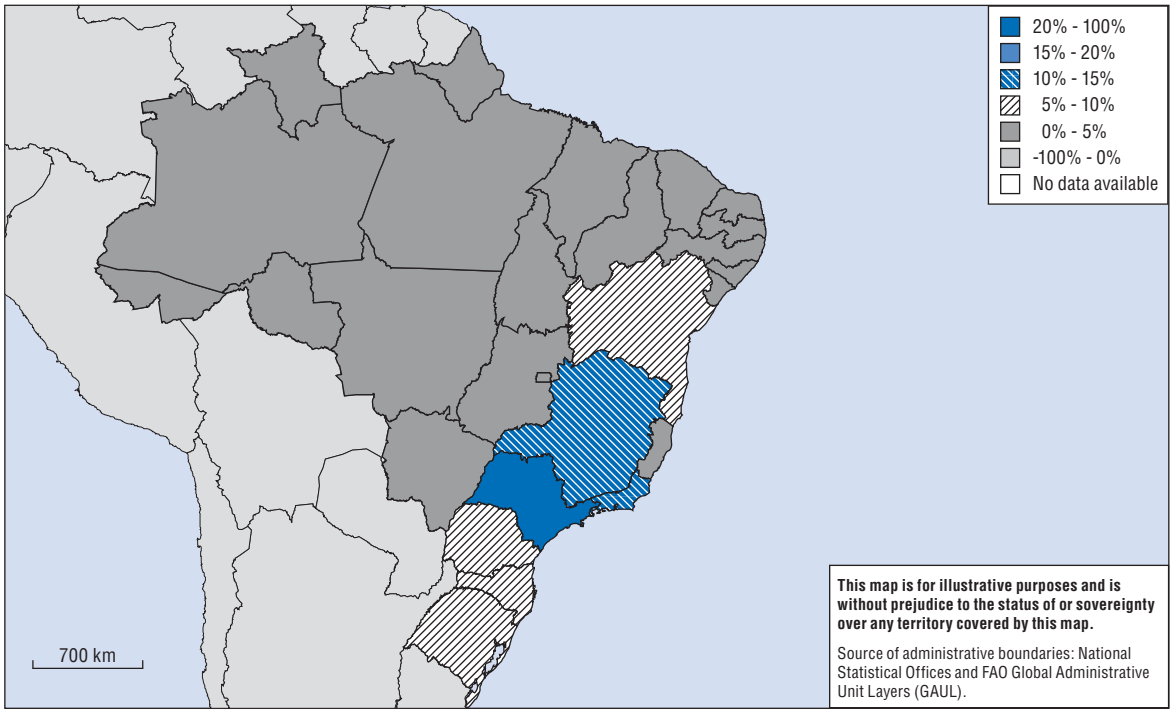
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



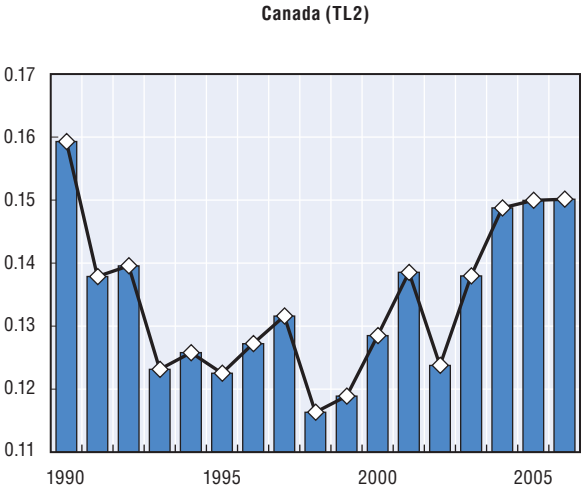
Source: Calculations based on the *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521106

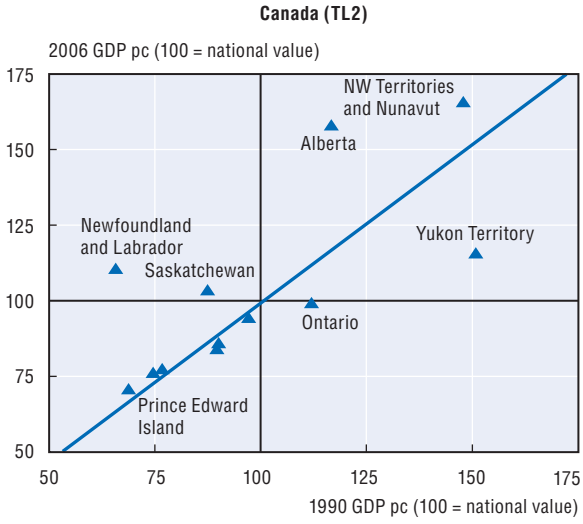
Canada

Population and territory	● 32.9 million inhabitants (2007), 9.01 million km^2 (the second largest OECD country).
Administrative structure	● Federal country. ● Two-tiered sub-national system: ❖ TL2: 10 provinces and 3 territories (Yukon Territory, North-West Territories, Nunavut). ❖ TL3: 288 Census Divisions, among which 27 predominantly urban regions (54% of total population, +4 pp over the past 30 years), 38 intermediate regions (17%, –0.9 pp) and 223 predominantly rural regions (27%, –3.1 pp). ❖ 5 000 municipalities (1 750 of them are members of the Federation of Canadian Municipalities).
Share of sub-national government in total spending/revenues	● Spending: 65.1% (2009). ● Revenues: 53.5% (2009).
Concentration and inequalities	● Just one (Ontario) out of Canada's 12 TL2 regions produces 35.5% of national GDP. Canada also has the highest index of geographic concentration of population among OECD TL3 regions. ● Inequality in GDP per capita among TL2 regions declined between 1990 and 1998, and it increased gradually from 1998 to 2007, approaching the levels at the beginning of the 1990s. ● The decline of inequality has been driven by a catching up process in two regions (Newfoundland and Labrador, and Saskatchewan), which displayed the highest (6.2%) and fourth highest (3.1%) growth rate in GDP per capita over the past decade respectively. The decline in inequality has also been triggered by the relative decline of two leading regions (Yukon Territory and Ontario) displaying the second lowest (1.49%) and the third lowest (1.52%) growth rate in GDP per capita over the past decade. ● In contrast, the strong performance of two leading regions (measured by their higher levels of GDP per capita) Northwest Territories and Nunavut and of Alberta has contributed to an increase in inequality. Northwest Territories and Nunavut displayed the second highest (5%) growth rate in GDP per capita and Alberta the third highest (4.9%) during the past decade. ● Ontario made the largest contribution (41%) to national growth during the 1995-2005 period, followed by Alberta (28%), Quebec (15%) and British Columbia (10.4%). The remaining regions together contributed 11.3% due to their small size.
Key challenges	● Growing regional competitiveness needs. ● Regional disparities, urban-rural divide.
Objectives of regional policy	● Promote endogenous regional growth, competitiveness and prosperity in all regions. ● Reduce regional disparities and provide equal opportunities and basic public services across regions.
Legal/institutional framework for regional policy	● Regional development agencies (RDAs). ● Other federal and provincial departments have development responsibilities. ● Bilateral federal-provincial agreement and co-funding. ● Provincial level strategy making.
Urban policy framework	–
Rural policy framework	● Canada's Rural Partnership. ● Rural Lens approach by Rural and Co-operatives Secretariat.
Major regional policy tools	● Many and diverse programmes of the RDAs, including innovation and community development. ● Community Futures Programme. ● National Research Council Technology Clusters. ● Infrastructure renewal programming, such as the Building Canada Plan and the Gas Tax Fund, Municipal Rural Infrastructure Fund. ● The equalisation programme and other federal fiscal transfer tools (not primarily or directly for economic development purposes, but to allow provinces to meet their constitutional responsibilities to provide a roughly equivalent level of services, mainly in education, health, and social services, at roughly equivalent levels of taxation).
Policy co-ordination at central level	● Regional ministers system. ● RDAs presence and advocacy in Ottawa.
Multi-level governance between national and sub-national levels	● Regional ministers system. ● RDAs presence in Ottawa. ● Federal regional councils. ● Bilateral federal-provincial agreement and co-funding.
Policy co-ordination at regional level (cross-sectoral)	● Regional development agencies. ● Federal regional councils.
Policy co-ordination at regional level (geographic)	● Special agencies, joint boards and commissions. ● Amalgamation of urban municipalities in mid- to late 1990s.
Evaluation and monitoring	● Regular evaluation of federal programmes and RDA activities.
Future orientations of regional policy	–

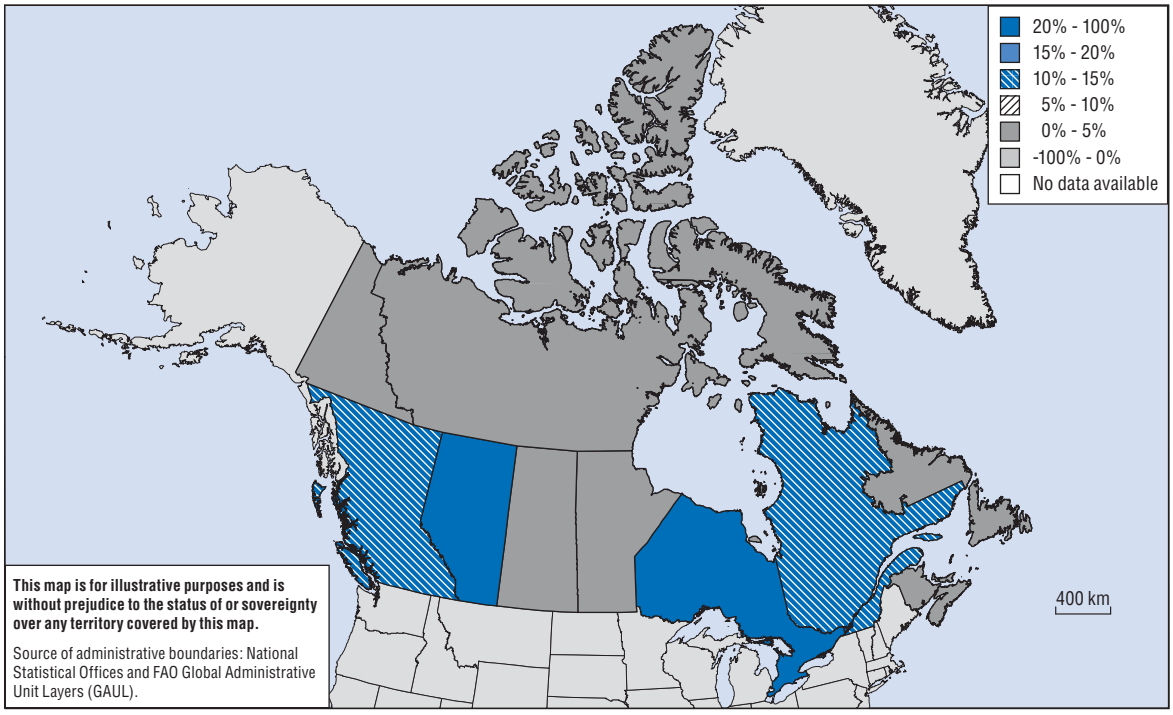
Gini index of inequality of GDP per capita across TL2 regions, 1990-2006



Regional performance in GDP per capita over time, 1990 and 2006



Regional contribution (%) to national GDP growth, 1995-2007



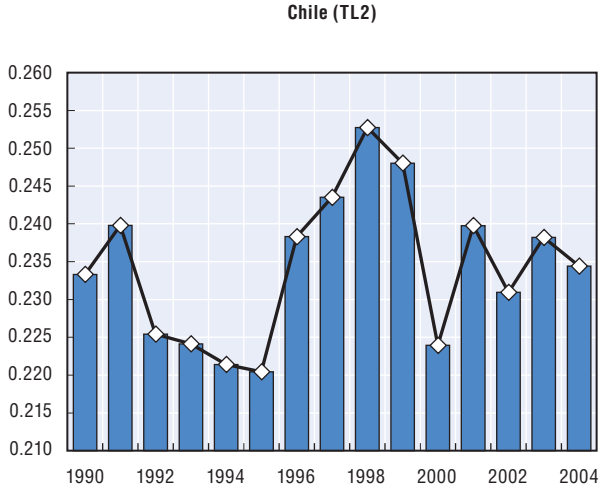
Source: Calculations based on *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521125

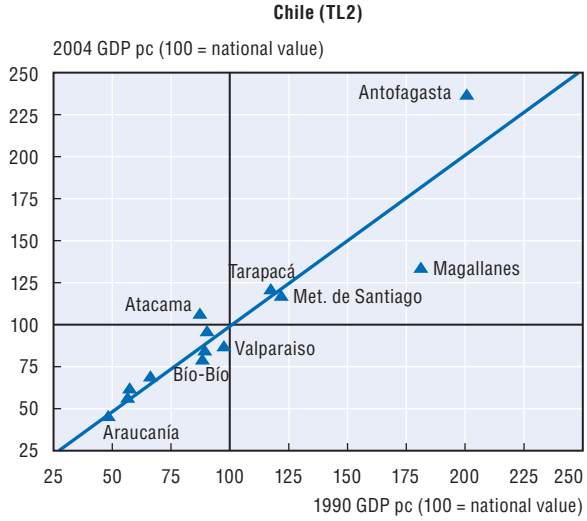
Chile

Population and territory	● 16.6 million inhabitants, 756 946 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system: ❖ TL2: 15 regions. ❖ TL3: 54 provinces, among which 6 are predominantly urban regions (50% of total population), 7 are intermediate regions (14%) and 41 are predominantly rural regions (36%). ❖ 345 municipalities.
Share of sub-national government in total spending/revenues	● Spending: 13.2% (2006). ● Revenues: 8.1% (2006).
Concentration and inequalities	● With nearly half of the Chilean population living in Santiago and almost 60% in Santiago and Bio-Bio, demographic concentration in Chile (61) is almost twice the OECD average (32), only surpassed by Iceland. However, the past 20 years have seen a move towards de-concentration and a decline in the geographic index of concentration by 3 percentage points. ● Santiago alone produces almost half (47.2%) of the national GDP. Territorial inequalities in GDP per capita among TL2 regions are the fourth highest in Chile and the second highest among TL3 regions in comparison to OECD countries. ● Although inequality has declined over the period 1998-2004, a longer time period reveals significant upward and downward movements in the Gini coefficient.
Key challenges	● Regional disparities. ● Dependence on a few sectors in limited regions.
Objectives of regional policy	● Regional competitiveness. ● Greater equity. ● Stronger democracy
Legal/institutional framework for regional policy	● Regional development strategies. ● Regional Agendas for Productive Development.
Urban policy framework	–
Rural policy framework	● Strategy for Territorial Economic Development for 2006-10.
Major regional policy tools	● Planning agreements (*acuerdos de programación*). ● National Fund for Regional Development. ● Competitiveness Innovation Fund. ● National Innovation Strategy (2007).
Policy co-ordination at central level	● Co-ordination by Sub-secretariat for Regional and Administrative Development (Subdere). ● Territorial Management Programme. ● Integrated Territorial Programme.
Multi-level governance between national and sub-national levels	● Planning agreements. ● Regional Development Agency. ● Territorial Management Programme.
Policy co-ordination at regional level (cross-sectoral)	● Regional Development Agency. ● Regional government. ● Territorial Management Programme.
Policy co-ordination at regional level (geographic)	● Regional government.
Evaluation and monitoring	● Management Improvement Programme (PMG). ● National System of Municipal Indicators.
Future orientations of regional policy	● Decentralisation (recently approved constitutional reform on regional government including the direct election of regional councils).

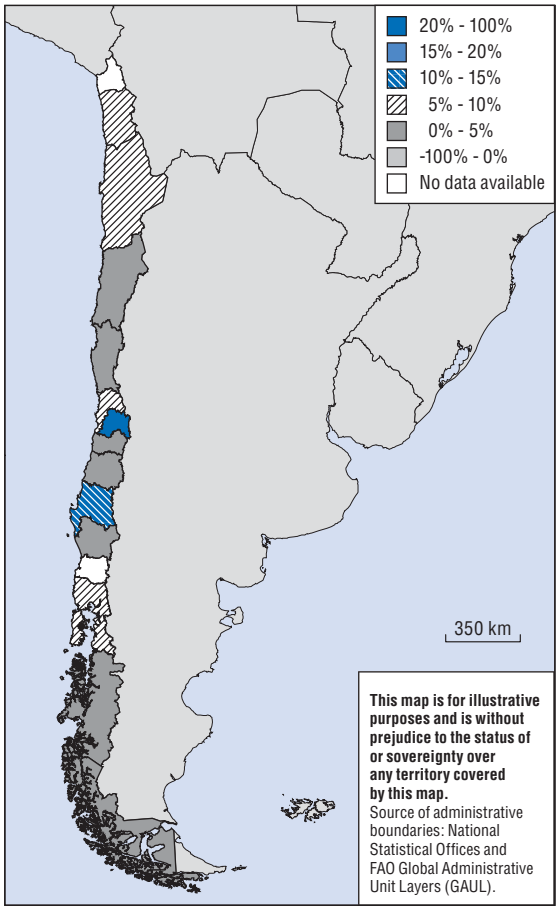
Gini index of inequality of GDP per capita across TL2 regions, 1990-2004



Regional performance in GDP per capita over time, 1990 and 2004



Regional contribution (%) to national GDP growth, 1996-2007



Source: Calculations based on *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521144

Czech Republic

Population and territory	● 10.3 million inhabitants (2007), 77 258 km^2 (the 8th smallest OECD country).
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 8 *Groups of Kraje*. ❖ TL3: 14 regions (*Kraje*), among which 1 predominantly urban region (Hlavní mesto Praha, 11% of total population, –0.2 pp over the past 15 years), 11 intermediate regions (84%, constant), and 1 predominantly rural region (Vysocina, 5%, +0.2 pp). ❖ 6 249 municipalities (*obce*), including 5733 municipalities, 496 towns and 20 "statutory cities". Prague has a special statute as both a municipality and a region.
Share of sub-national government in total spending/revenues	● Spending: 26.6% (2009). ● Revenues: 19.3% (2009).
Concentration and inequalities	● Second lowest index of geographic concentration of economic activity and population among TL3 regions. ● Inequalities in GDP per capita among TL2 regions have been steadily increasing since the beginning of the 1990s, with the exception of three years from 1995 to 1996 and from 2001 to 2003. ● The increase of inequality has been mainly driven by buoyant growth rate (4.9%) in GDP per capita of the region Praha over the past 10 years. As a result, Praha's GDP per capita increased significantly from 29% above the national average in 1990 to 121% above the national average in 2007. ● In contrast, inequality has been reduced by the catching-up process displayed by the region Stredni Cechy, recording the second highest GDP per capita growth rate (3.4%) over the past decade. As a result, Stredni Cechy reduced its gap in GDP per capita with respect to the national average, from 25% below the national average in 1990 to only 6% in 2007. The relative decline of leading regions (Stredni Morava and Severovychod) has also contributed to a reduction in inequality. Both regions displayed the second lowest (1.7%) and the lowest (1.0%) growth rate in GDP per capita over the past decade. ● Praha contributed almost 40% of total growth during this period. Due to the buoyant growth rate in GDP per capita of the lagging region Stredni Cechy, its contribution to national growth was the second largest (14%).
Key challenges	● Increase of intra-regional and inter-regional disparities. ● Development gap with the EU average.
Objectives of regional policy	● Increase competitiveness, especially reducing the gap with the EU average. ● Reduce regional disparities; achieve balanced, harmonised and sustainable regional development.
Legal/institutional framework for regional policy[1]	● Act on Support for Regional Development (2000). ● Regional Development Strategy. ● Regional Development Programme at *Kraje* level. ● Spatial Development Policy/Building Code.
Urban policy framework	● Principles of Urban Policy (2007-13).
Rural policy framework[2]	–
Major regional policy tools	● Regional Development Strategy. ● Strategy of Economic Growth. ● National Cluster Strategy (2005). ● Technology Innovation Centres. ● National fiscal transfer to regions and municipalities.
Policy co-ordination at central level	● Co-ordination of the Ministry for Regional Development including the National Co-ordination Authority. ● Regional Development Strategy. ● Spatial Development Policy.
Multi-level governance between national and sub-national levels	● Spatial Development Policy.
Policy co-ordination at regional level (cross-sectoral)	● Self-governing regions (*Kraje*). ● Regional Council of NUTS 2 Cohesion Regions.
Policy co-ordination at regional level (geographic)	● Working Group on Urban Development. ● Micro-regions.
Evaluation and monitoring	● Monitoring committees. ● Internal audit of regional council.
Future orientations of regional policy	● Framework Position of the Czech Republic on the EU Cohesion Policy after 2013.

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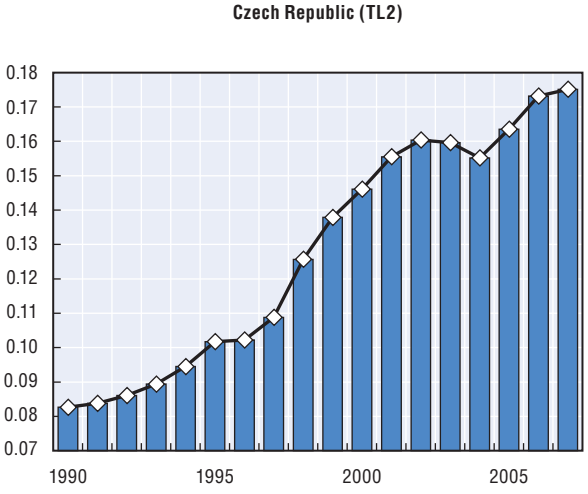
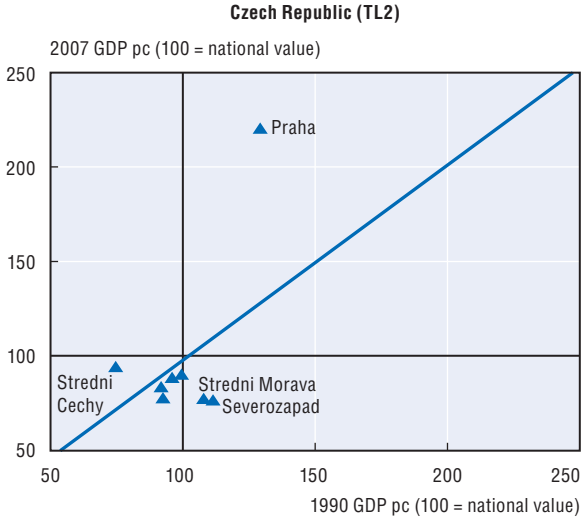
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

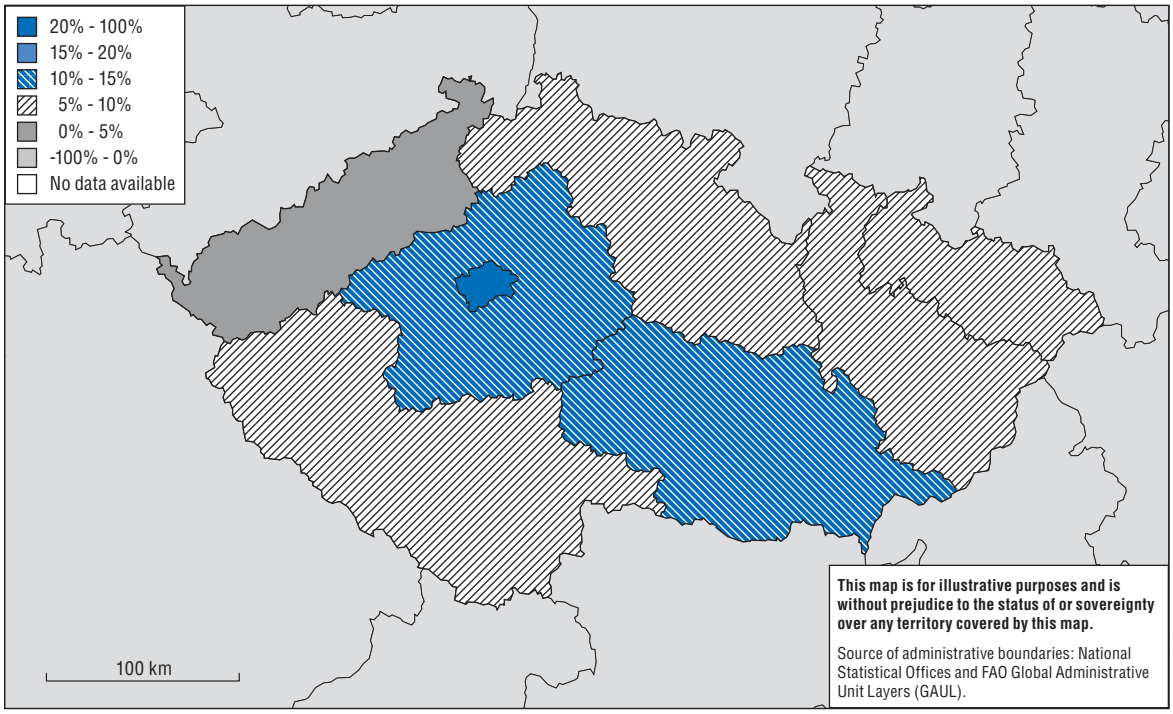
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

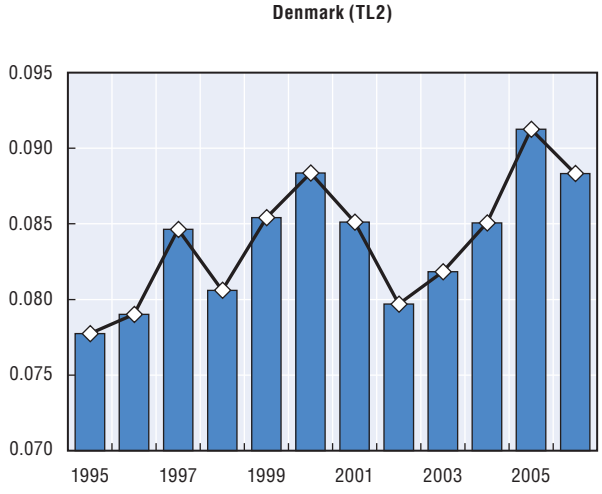
StatLink http://dx.doi.org/10.1787/888932521163

Denmark

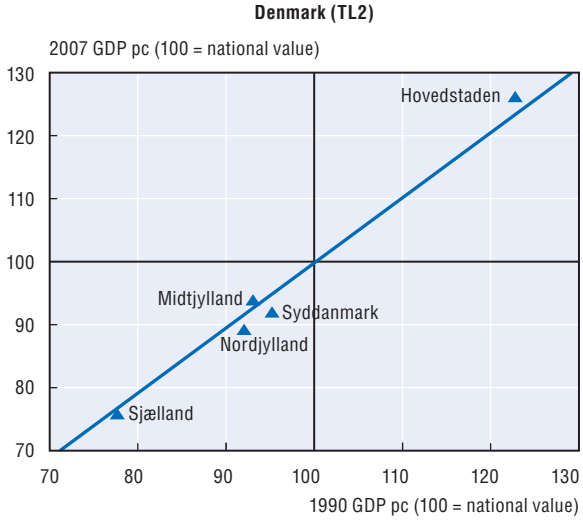
Population and territory	● 5.4 million inhabitants (2007), 43 075 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 5 *Regioner*. ❖ TL3: 11 Landsdeler.
Share of sub-national government in total spending/revenues	● Spending: 63.4% (2009). ● Revenues: 28.7% (2009).
Concentration and inequalities	● The Danish economy is less concentrated on average than in OECD countries, with 10% of Danish TL3 regions producing 18% of the national GDP (as opposed to 38% in the OECD). The TL3 region with the highest contribution to growth during the period 1995-2005 was Østjylland, who accounted for almost 16% of the change in GDP. ● Although inequality among TL2 regions increased over the period 1995-2006, it fluctuated significantly dropping in 1998, over 2000-03 and in 2006. The rise in inequality has been driven by the region Hovedstaden increasing its relative position from 23% above the national average to 26%. In contrast, Syddanmark, Nordjyland and Sjælland, all regions with below national average GDP per capita levels, dropped their relative position and Midtjylland maintained its relative position over this period. ● Denmark is the OECD country with the smallest regional disparity in terms of GDP per worker (2007).
Key challenges	● A number of relatively remote and geographically scattered pockets of underperformance.
Objectives of regional policy	● Competitiveness focus in Business Development Act. ● Reducing differences between regions.
Legal/institutional framework for regional policy[1]	● Business Development Act (2005). ● Regional Development Plan. ● Business Development Strategy.
Urban policy framework	● Comprehensive urban policy for the Capital Region.
Rural policy framework[2]	–
Major regional policy tools	● Business Development Act. ● Fiscal equalisation scheme.
Policy co-ordination at central level	● Ministerial Committee for Regional Policy.
Multi-level governance between national and sub-national levels	● Partnership agreements. ● Co-ordination of Regional Growth Forum.
Policy co-ordination at regional level (cross-sectoral)	● Co-ordination of Regional Growth Forum.
Policy co-ordination at regional level (geographic)	● Municipal mergers. ● Establishment of directly elected regional councils.
Evaluation and monitoring	● Standardisation of data collecting system. ● *Regional Competitiveness Report*.
Future orientations of regional policy	–

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.
3. Due to a break in the series, data on the GDP per capita is only available in the *OECD Regional Database* for the period 2005-07.

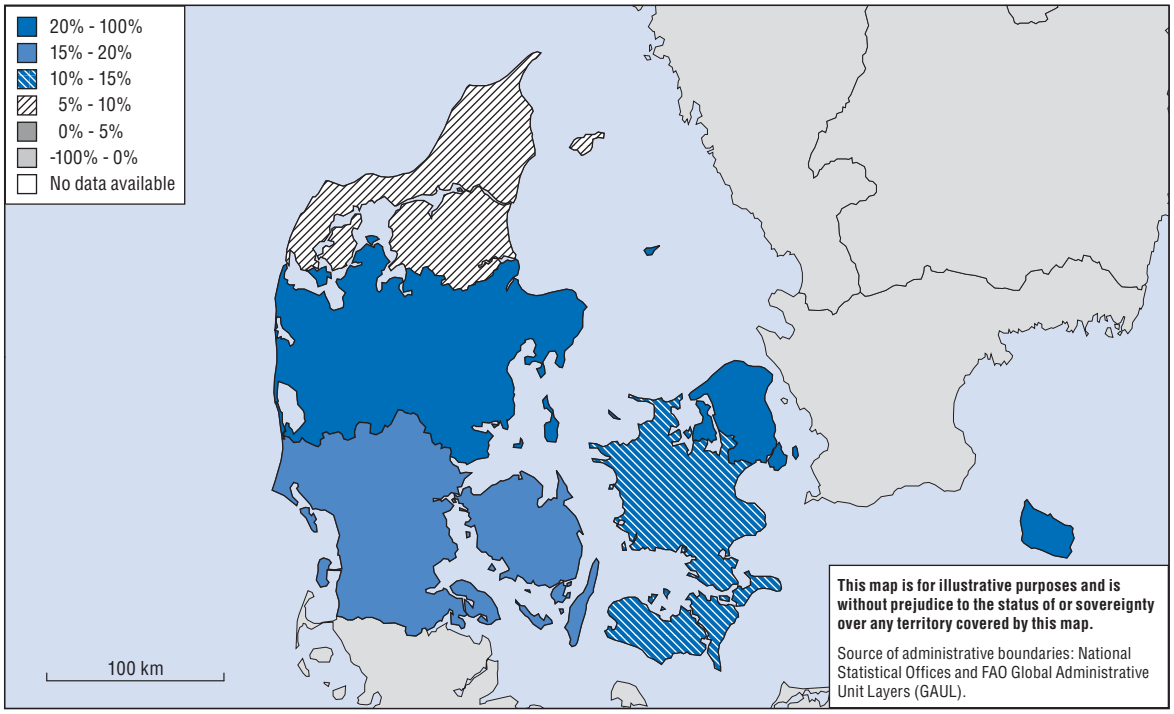
Gini index of inequality of GDP per capita across TL2 regions, 2005-07



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on *OECD Regional Database* (2010), demographic data estimated from 1995-2002.

StatLink http://dx.doi.org/10.1787/888932521182

Finland

Population and territory	● 5.2 million inhabitants (2007), 304 111 km^2.
Administrative structure	● Unitary country. ● Only one level of sub-national government: 416 municipalities (*kuntaa*). Two territories have a specific status: the island province of Åland has an autonomous administration, and the region of Kainuu has been given the temporary statute of a self-governing region from 2005 to 2012 as part of a regional self-government experiment. ❖ TL2: 5 *Suuralueet*. ❖ TL3: 20 *Maakunnat* among which one predominantly urban region (Uusimaa, 25.9% of total population, +3.4 pp over the past 20 years), 3 intermediate regions (21.1%, +0.1 pp), and 16 predominantly rural regions (53%, –3.5 pp).
Share of sub-national government in total spending/revenues	● Spending: 40.1% (2009). ● Revenues: 29.7% (2009).
Concentration and inequalities	● Finland has the fifth highest index of geographic concentration of GDP among TL3 regions in the OECD. 35% of the national GDP is produced by one (Uusimaa) of Finland's 20 TL3 regions, and 57% of the national GDP is produced by one (Etela-Suomi) of Finland's 5 TL2 regions. ● Inequality in GDP per capita among TL2 regions increased since the beginning of the 1980s, although from 1984 to 2007 inequality fluctuated without a clear trend. ● The increase of inequality has been driven by a relative increase in Finland's two regions with the highest GDP per capita (Aland and Etla-Suomi), and by the relative decline of Finland's three lagging regions (Lansi-Suomi, Pohjois-Suomi and Ita-Suomi). ● Aland's GDP per capita level increased from 13% above the national average in 1980 to 26% above the national average in 2007. In contrast, Ita-Suomi experienced the largest decline, increasing its gap from 18% below the national average in 1980 to 27% below the average in 2007. ● Due to the large size (measured by GDP share) of Etela-Suomi and strong growth rate in GDP per capita over the past decade, its contribution to national GDP growth stood at 65%, followed by Lansi-Suomi (21%) and Pohjois-Suomi (8.6%).
Key challenges	● Remaining regional disparities. ● Ageing society and the impact on regions.
Objectives of regional policy	● Improving regional competitiveness. ● Strengthening regional viability (through multi-centred territorial structure). ● Reducing regional disparities. ● Solving specific regional challenges (*e.g.* social exclusion).
Legal/institutional framework for regional policy[1]	● Act on Regional Development (1652/2009). ● Government Decree on Regional Development (1837/2009). ● Government Decision on Regional Development Targets (2008). ● Regional Strategic Programme.
Urban policy framework	● Urban Policy Committee. ● Government Decision-in-Principle on Urban Policy (2009).
Rural policy framework[2]	● Rural Policy Committee. ● Rural Policy Programme (2009-13). ● *Government Report on Rural Policy* (2009). ● National Strategic Plan for Rural Policy. ● Rural Development Programme (2007-13).
Major regional policy tools	● Centre of Expertise and Regional Centre programmes. ● Regional Cohesion and Competitiveness Programme (COCO). ● Business Development Aid and Development Aid for the Business Environment. ● Annual regional development funding.
Policy co-ordination at central level	● New Ministry of Employment and the Economy. ● Regional Development Advisory Board (a new negotiation committee from 2010). ● Regional proofing. ● Rural Policy Programme and Rural Policy Committee.
Multi-level governance between national and sub-national levels	● Regional strategic programmes. ● Regional Development Advisory Board (a new negotiation committee from 2010). ● Regional Management Committee. ● Budgeting process of Regional Council and sector ministries.
Policy co-ordination at regional level (cross-sectoral)	● Regional strategic programmes by regional councils.
Policy co-ordination at regional level (geographic)	● Framework Act for the Restructuring of Local Government and Services (2006). ● Voluntary amalgamation. ● Joint municipal board. ● Kainuu Region (pilot project).
Evaluation and monitoring	–
Future orientations of regional policy	● ALKU administrative reform project. ● Government Decision-in-Principle on Rural Policy.

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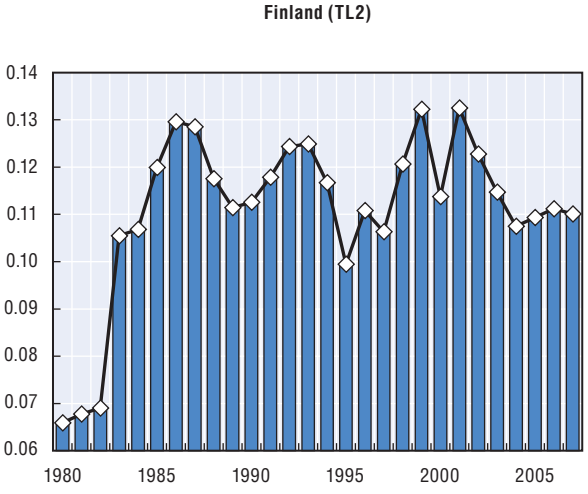
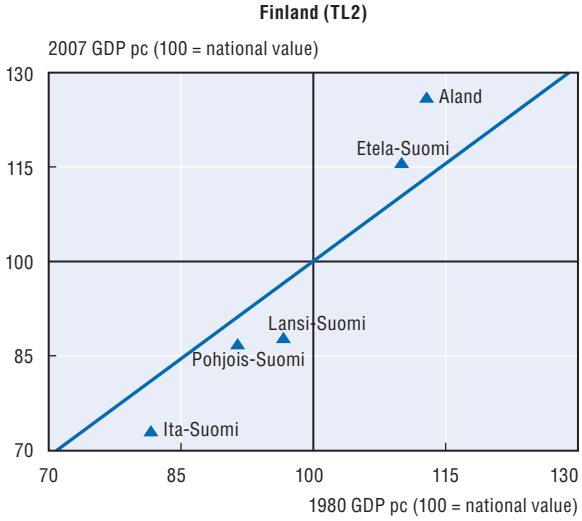
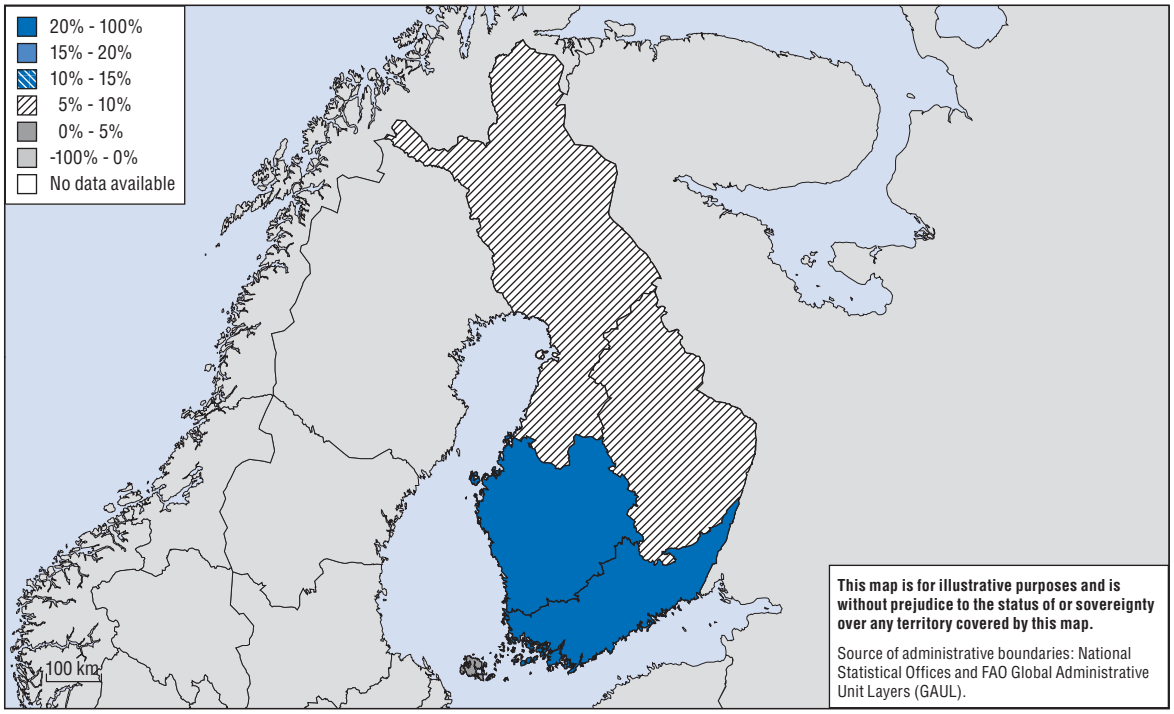
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521201

France

Population and territory	● 62 million inhabitants (2007), 543 965 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system: ❖ TL2: 22 *Régions*. ❖ TL3: 100 *Départements*, among which 11 predominantly urban regions (29% of total population, –0.6 pp over the past 25 years), 49 intermediate regions (55%, +1.6 pp), and 36 predominantly rural regions (17%, –1 pp). ❖ 36 683 municipalities (communes). ❖ Corsica has a special regional government statute and Paris is both a municipality and a *Département*.
Share of sub-national government in total spending/revenues	● Spending: 20.7% (2009). ● Revenues: 17.2% (2009).
Concentration and inequalities	● Economic concentration in France is close to the OECD average, with 37% of national GDP being produced by 10% of TL3 regions. However, France's TL2 capital region Île-de-France produced almost one third (28%) of national output in 2007. ● Inequality in GDP per capita among France's TL2 regions has declined from 1980 to 2007. Although inequality fluctuated during the years 1980 to 1990, with a strong increase from 1983-85, it has been gradually declining since the 1990s. ● The catching up process displayed by Corse has contributed to the decline in inequality. Corse displayed the fastest growth rate in GDP per capita (2.4%) among French regions during the past decade and reduced its gap in GDP per capita levels from 40% below the national average in 1980 to 23% below the average in 2007. ● The weak performance of Alsace and Champagne-Ardenne also contributed to a reduction in inequality. Both regions with higher GDP per capita levels than the national average have been growing below national standards during the past decade, at 0.5% and 1.5% respectively. ● Picardie and Lorraine have also performed below national standards, recording the second (0.8%) and third lowest (1%) growth rates in GDP per capita during the past decade. ● The strongest contribution to national growth was led by Île-de-France, recording the fifth highest GDP per capita growth rate (1.7%) and contributing to 30% of national growth during the past decade, followed by Rhône-Alpes (10.7% of national growth).
Key challenges	● Restructuring of rural and old industrial areas. ● Increasing overall competitiveness. ● Sub-regional disparities.
Objectives of regional policy	● Developing attractiveness and competitiveness through regional potential development. ● Preserving territorial cohesion. ● Sustainable development.
Legal/institutional framework for regional policy[1]	● Framework Law on Regional Planning and Sustainable Development (1995, modified in 1999). ● Law of 2004 on Local Responsibilities and Freedoms. ● National Sustainable Development Strategy (SNDD) and *Grenelle de l'environnement* (two laws).
Urban policy framework	● Urban Social Cohesion Contracts (CUCS). ● Strengthening and Simplifying Inter-municipal Act (EPCI, 1999). ● Urban Solidarity and Development Act (SRU, 2000).
Rural policy framework[2]	● National Plan for Rural Development. ● Rural Revitalisation Act (2005). ● Rural revitalisation zones. ● *Pôles d'excellence rurale.*
Major regional policy tools	● State-region project contracts (CPER). ● Competitiveness poles and other cluster policies. ● Regional Policy Grant (PAT). ● Sites or local contracts of revitalisation. ● Regional Territorial Planning Master Plan. ● Regional Economic Development Master Plan.
Policy co-ordination at central level	● Co-ordination by DATAR. ● Study and Monitoring Group of State-Region Project. ● CIADT (Inter-ministerial Committee for Territorial Development). ● PASER Monitoring Committee. ● Ministry of Rural Space and Territorial Development. ● State Secretariat (Capital Region), minister (territorial development).
Multi-level governance between national and sub-national levels	● State-region project contracts (CPER). ● Co-ordination by *Préfet*, Project for State Regional Strategy (PASER). ● PASER Monitoring Committee.
Policy co-ordination at regional level (cross-sectoral)	● Co-ordination by regional *Préfet*. ● Co-ordination by regional councils.
Policy co-ordination at regional level (geographic)	● Public Establishment for Inter-Communal Co-operation (EPCI): ❖ *Communauté de communes, Communauté d'agglomération, Communauté urbaine.* ❖ *Syndicat d'agglomération nouvelle.* ● *Pays.* ● Territorial Coherence Scheme (SCOT).
Evaluation and monitoring	● National and regional evaluation councils. ● Establishment of territorial observatory (2005).
Future orientations of regional policy	● Climate change and energy scheme (*Loi Grenelle 2*). ● Territorial reforming law.

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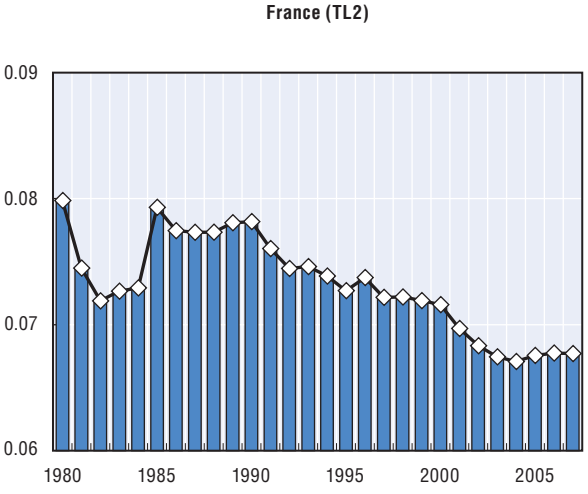
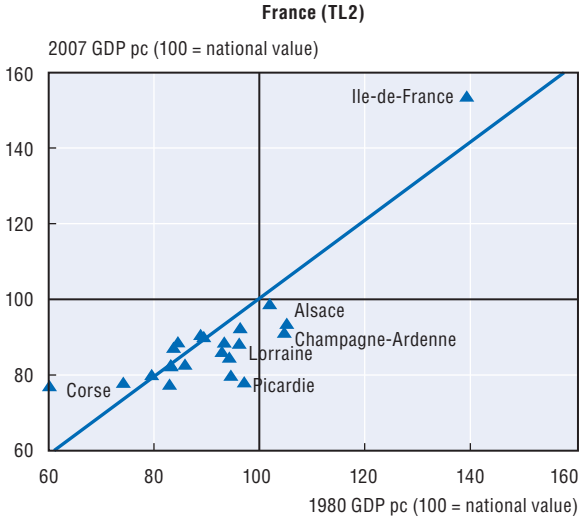
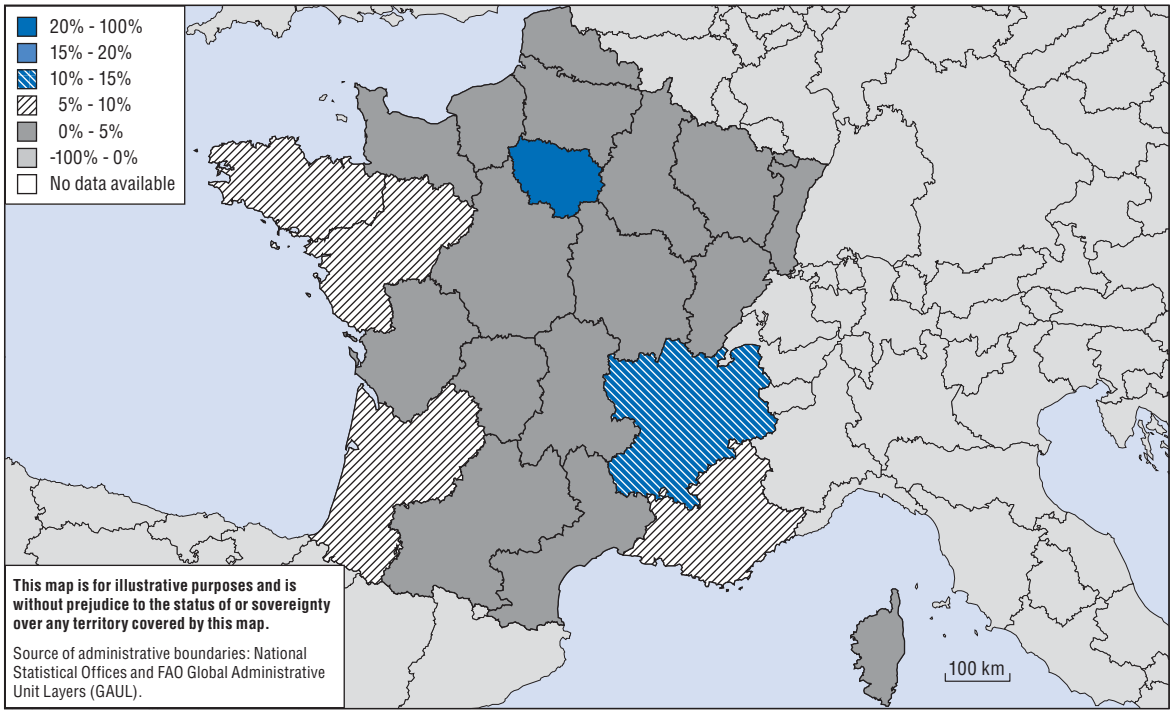
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521220

Germany

Population and territory	● 82.2 million inhabitants (2007, the fourth most populated OECD country), 357 027 km^2.
Administrative structure	● Federal country. ● Three-tiered sub-national system: ❖ TL2: 16 *Länder*. Berlin, Bremen and Hamburg are states in their own right and called city states (*Stadtstaaten*). ❖ TL3: 97 *Social Planning Regions*, among which 27 predominantly urban regions (about half of total population, +0.3 pp over the past 15 years), 50 intermediate regions (40%, –0.1 pp), and 20 predominantly rural regions (10%, –0.2 pp). ❖ The second tier at the intermediate level comprises 323 rural districts (*Landkreise*) and the third tier at the local level 12 196 municipalities (*Gemeinden*) and 116 district-free cities (*Kreisfreie Städte*).
Share of sub-national government in total spending/revenues	● Spending: 37.0% (2009). ● Revenues: 33.6% (2009).
Concentration and inequalities	● Germany's economy is less concentrated than the OECD average according to the index of geographic concentration among TL3 regions. The top 10% of Germany's TL3 regions produce 35% of national GDP as opposed to 38% in the OECD. ● After Germany's unification process, inequality in GDP per capita among its TL2 regions declined from 1990 to 2007. The largest decline occurred during the years 1990 to 1993. Since 1993 inequality stabilised and even increased marginally in the year 2000. Since 2000 inequality has been gradually declining albeit at a slow pace. ● Germany's reduction in inequality is driven by a catching up process of lagging regions Thüringen, Sachsen Anhalt, Sachsen, Brandenburg and Meckenburg-Vorpommern and by a relative loss of leading regions Nordrhein-Westfalen, Baden-Württemberg and Bremen. ● The strong economic performance of Thüringen, Sachsen Anhalt, Sachsen, Brandenburg and Meckenburg-Vorpommern recording the fastest (3.23%), second fastest (2.61%), third fastest (1.98%), 6th fastest (1.56%) and 8th fastest (1.43%) GDP per capita growth rates among German TL2 regions respectively has contributed to reducing their respective GDP per capita gaps over the past 17 years: Thüringen from 61% below the national average to 29%, Sachsen Anhalt from 60% to 29%, Sachsen from 58% to 26%, Brandenburg from 54% to 30% and Meckenburg-Vorpommern from 57% to 33%. ● Among Germany's leading regions in GDP per capita levels, Hamburg (1.62%), Bayern (1.61%), Bremen (1.53%) and Hessen (1.27%) recorded above national (1.19%) average growth rates in GDP per capita over the past decade, as opposed to Bayern Württenberg (1.15%) and Nordrhein-Westfalen (0.74%). Consequently, the largest contribution to overall GDP growth was by Bayern and Bayern Württenberg, contributing to 27% and 17%. Due to the large size of Nordrhein-Westfalen its contribution was significant (15%).
Key challenges	● Ongoing regional disparities between old and new *Länder*, ongoing disparities of living standards within old and new *Länder*.
Objectives of regional policy	● Uniformity of living standards (Constitution). ● Mitigate structural weakness of new *Länder* and parts of the old *Länder*.
Legal/institutional framework for regional policy[1]	● *Land* level regional policy making. ● Co-ordination role of the federal government, especially through the Joint Task for the Improvement of Regional Economic Structure (GRW) and its multi-annual Co-ordination Framework as well as for EU Structural Funds.
Urban policy framework	● National Policy of Urban Development.
Rural policy framework[2]	● Co-ordination of the Joint Task for the Improvement of Agricultural Structure and Coastal Protection (GAK) and its Four-year Plan.
Major regional policy tools	● GRW and EU Structural Funds aid and funding. ● Investment Allowance Scheme. ● Funds of Urban Development.
Policy co-ordination at central level	● Co-ordination of the Joint Task for the Improvement of Regional Economic Structure (GRW) and its multi-annual Co-ordination Framework. ● Co-ordination of EU Cohesion Policy implementation. ● Management of EU and domestic policy by the Ministry of Economy and Technology. ● Funding of urban development and co-ordination by the Ministry of Transport, Building and Urban Affairs.
Multi-level governance between national and sub-national levels	● Co-ordination of the Joint Task for the Improvement of Regional Economic Structure (GRW) and its multi-annual Co-ordination Framework. ● Co-ordination of EU Cohesion Policy implementation. ● Sectoral groups for co-ordinating policies between federal and state levels (*Bund-Länder-Gruppen*).
Policy co-ordination at regional level (cross-sectoral)	● Co-ordination between regional ministries.
Policy co-ordination at regional level (geographic)	● Planning regions.
Evaluation and monitoring	● External audit commissioned by the Ministry of Economy and Technology.
Future orientations of regional policy	–

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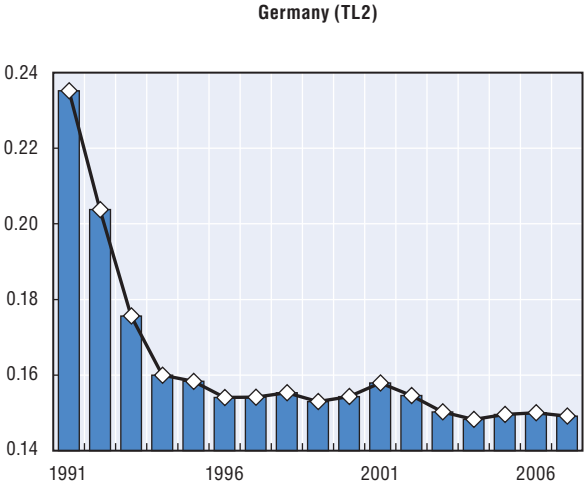
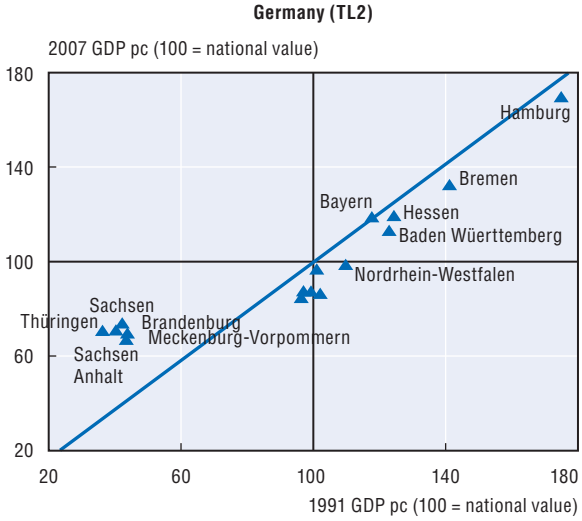
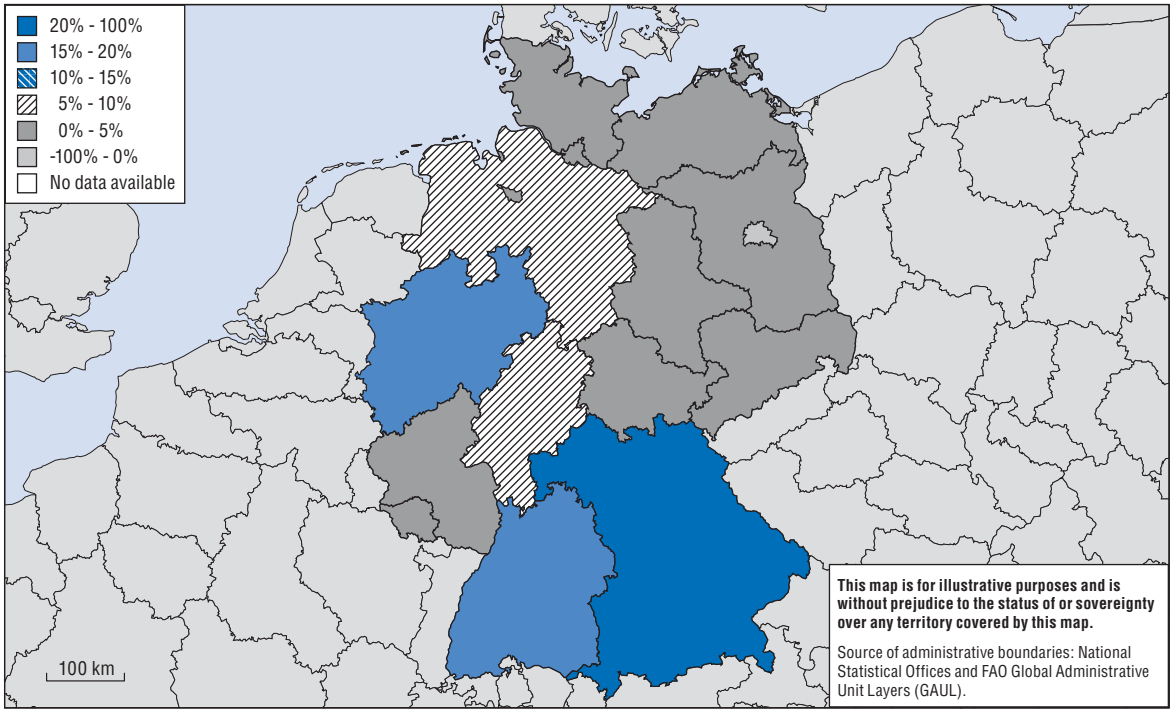
Gini index of inequality of GDP per capita across TL2 regions, 1991-2007



Regional performance in GDP per capita over time, 1991 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521239

Greece

Population and territory	● 11.2 million inhabitants (2007), 130 822 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system (as of end 2010): ❖ TL2: 4 Groups of development regions. ❖ TL3: 13 Development regions. ❖ 914 municipalities (*dimos*) and 130 communes (*koinotita*).
Share of sub-national government in total spending/revenues	● Spending: 5.8% (2009). ● Revenues: 2.8% (2009).
Concentration and inequalities	● The Greek economy is more concentrated on average than in OECD countries, with 10% of Greek TL3 regions producing 43% of the national GDP (as opposed to 38% in the OECD). Almost 40% (38.1%) of national GDP is produced by Attiki, one of Greece's four TL2 regions. ● Inequality in GDP per capita among TL2 regions in Greece increased from 1980 to 2007. From the early 1980s to the early 1990s, inequality first declined, reaching its lowest level in the late 1980s. Inequality gradually increased from 1991 onwards, and although it declined again by the late 1990s, it tripled its 1999 value in 2007. ● The increase of inequality is driven by two forces: leading regions further increase their lead over time, or lagging regions fall further behind. The leading region Attiki outperformed the national average, displaying the highest annual average growth rate (3.4%) over the past decade. Moreover, it has been the only TL2 region with positive GDP per capita growth rate during the past decade, and one of two TL2 regions with positive GDP growth rate. Attiki has contributed to the bulk of national GDP growth over the past decade. Kentriki Ellada and Voreia Ellada reduced their GDP by 9.9% and 7.7% respectively. Attiki's strong performance increased its 1980 level of GDP per capita from 15% above the national average to 46% above the average in 2007. ● The underperformance of Kentriki Ellada and Voreia Ellada, with negative average annual GDP per capita growth rates during the past decade of –1% and –0.8% respectively, has pushed their GDP per capita levels of the 1980s below the national average over a 27-year period. Kentriki Ellada's GDP per capita dropped from 1% above the national average in 1980 to 29% below the national average in 2007, and Voreia Ellada's dropped by 10% below the national average to 25% below the average during the same period.
Key challenges	● Severe regional disparities at inter-regional and intra-regional levels. ● Development gap of the entire country with the EU average.
Objectives of regional policy	● Expand the country's growth potential. ● Reduce inter- and intra-regional disparities. ● Achieve territorial cohesion.
Legal/institutional framework for regional policy[1]	● Development Law (2004, 2006), new law by 2011. ● Law on Management, Control and Implementation of Development Actions (3614/2007), subject to amendments. ● Law 3463/2006, Articles 203-207 (yearly operational programmes for municipalities). ● General Frameworks for Spatial Planning and Sustainable Development.
Urban policy framework	● Regulatory Plans for Urban Agglomerations (only for larger cities).
Rural policy framework[2]	● Rural Development Law (2005).
Major regional policy tools	● National Reform Programme. ● Regional innovation poles. ● National Plan for Transport. ● National Plan for Social Protection and Social Inclusion. ● THESEUS Development Programme.
Policy co-ordination at central level	● Inter-ministerial Committee of Development Programmes. ● National Co-ordination Authority. ● Conference of Presidents of the Managing Authorities.
Multi-level governance between national and sub-national levels	● KAPODISTRIAS I Plan. ● Conference of Presidents of the Managing Authorities.
Policy co-ordination at regional level (cross-sectoral)	● Regional councils. ● Conference of Presidents of the Managing Authorities. ● Monitoring Committee of ROPs.
Policy co-ordination at regional level (geographic)	● Monitoring Committee of ROPs. ● Local Unions of Municipalities and Communities (TEDK). ● Regional Councils.
Evaluation and monitoring	● National Co-ordination Authority (Ministry of Economy, Competitiveness and Shipping – YPOIAN). ● Managing authorities of all OPs.
Future orientations of regional policy	● KALLIKRATIS Plan (decentralisation reform).

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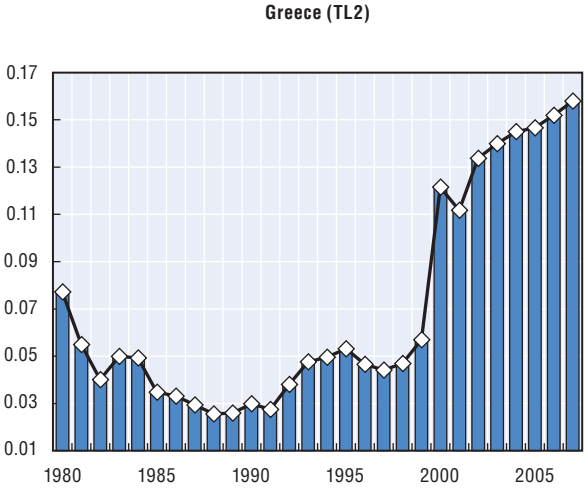
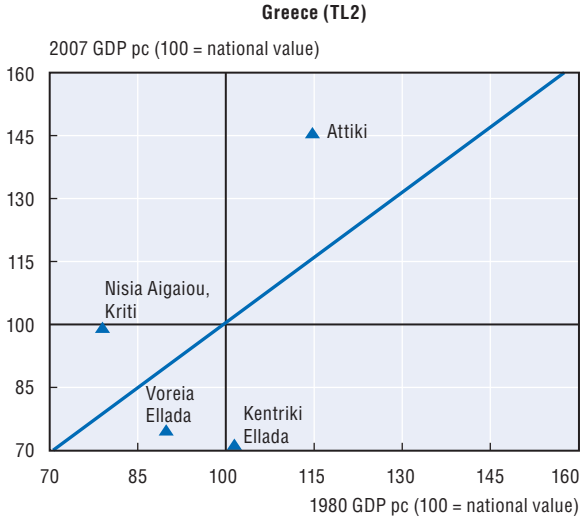
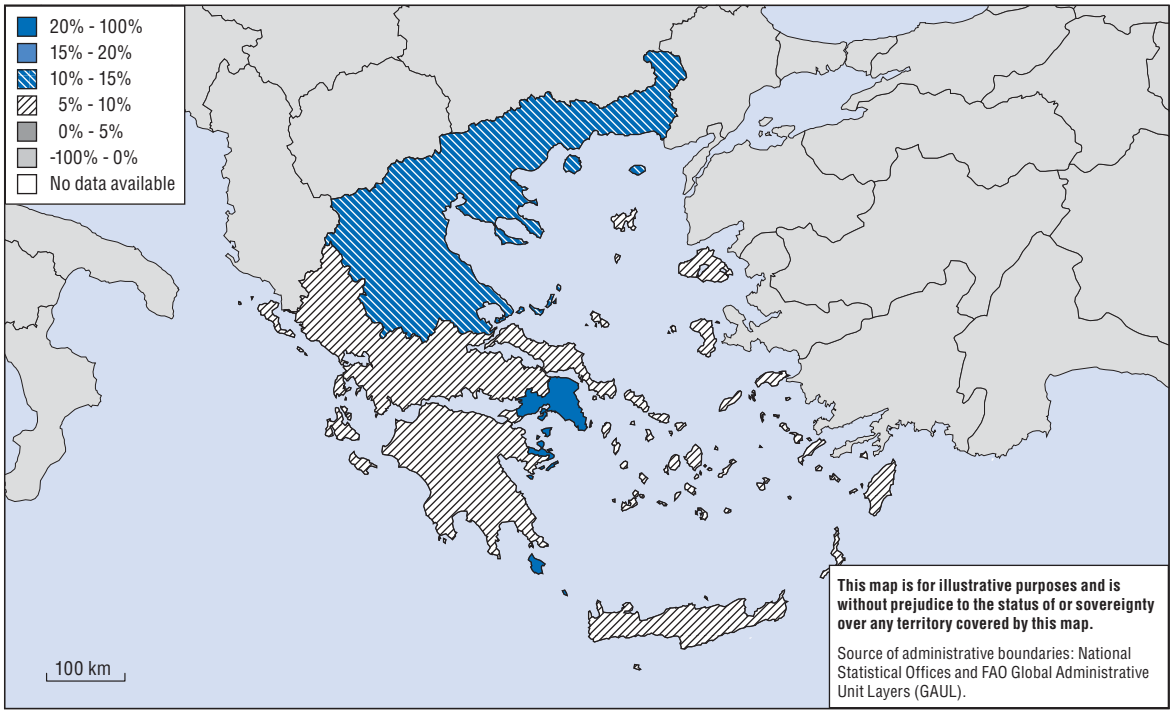
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

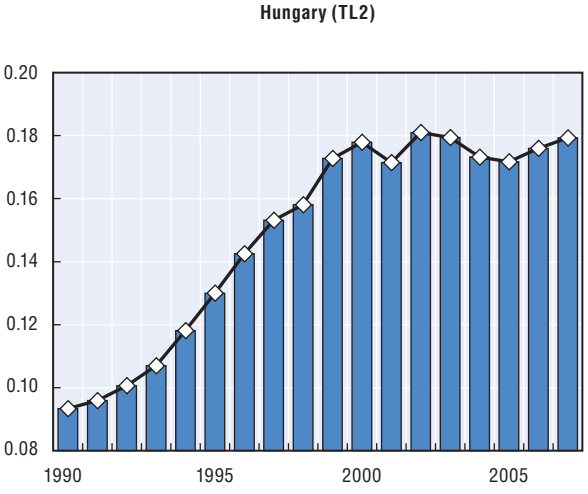
StatLink http://dx.doi.org/10.1787/888932521258

Hungary

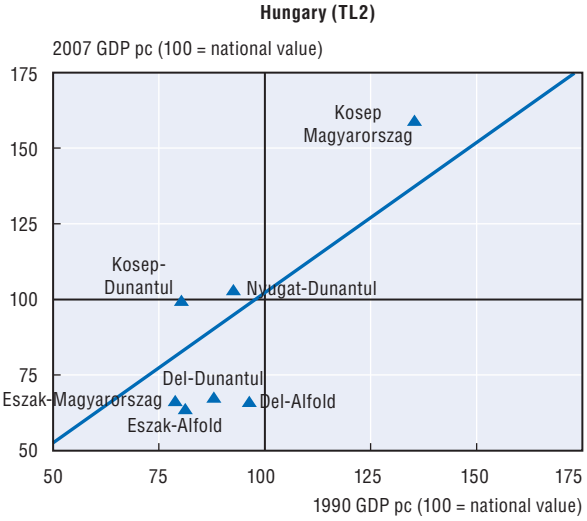
Population and territory	● 10 million inhabitants (2007), 93 028 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 7 *Tervezesi-statisztikai region*. ❖ TL3: 19 counties (*Megyek*) and special statute for *Budapest* (subdivided into 23 city districts), among which one predominantly urban region (17% of total population, –2.6 pp over the past 15 years), 8 intermediate regions (42%, +2.5 pp) and 11 predominantly rural regions (41%, +0.2 pp). ❖ 3 175 municipalities (*települési önkormányzatok*), among which 2 863 villages, 265 towns, 23 towns with county statute.
Share of sub-national government in total spending/revenues	● Spending: 23.2% (2009). ● Revenues: 9.6% (2009).
Concentration and inequalities	● Economic concentration in Hungary resembles the OECD average according to the index of geographic concentration among TL3 regions. Nonetheless, its top 10% of regions produce a larger share of the national output (45%) than in other OECD countries (38%). ● Inequality in GDP per capita among Hungary's TL2 regions increased over 1990-2007. During the 1990s inequality rose steadily and from the year 2000 onward it stabilised and has been fluctuating between the Gini rage of 0.17 and 0.18. ● Hungary's increase in inequality is driven by its leading region (*e.g.* Kosep Magyarorszag) gaining relative to other TL2 regions and by its lagging regions falling further behind (*e.g.* Del-Dunantul, Del-Alfold, Eszak-Alfold and Eszak Magyarorszag). ● Kosep Magyarorszag has outperformed the national average, recording the fastest annual average growth in GDP per capita (5.6%) over the period 1995-2005 and increasing its GDP per capita level further above national standards from 35% above the average in 1990 to 59% in 2007. ● Due to its large GDP size, Kosep Magyarorszag has been Hungary's engine of growth, contributing to 56.4% of Hungary's overall GDP growth during the past decade. ● Lagging regions contributing to inequality by falling further behind national standards include Del-Alfold, Del-Dunantul, Eszak-Alfold and Eszak Magyarorszag, recording the lowest (2.2%), second lowest (2.6%), third lowest (3.1%) and fourth lowest (3.3%) GDP per capita growth rates during 1995-2005 among Hungarian TL2 regions. The lower than average growth rates increased their GDP per capita gap levels over the period 1990-2007 from 4% below the national average to 34% for Del-Alfold, from 12% to 38% for Del-Dunantul, from 19% to 36% for Eszak-Alfold and from 21% to 33% for Eszak Magyarorszag. The combined contribution of these four lagging regions to Hungarian GDP growth over the last decade was 23%. ● Over the past 27 years, the only Hungarian region with a visible pattern of convergence is Kosep-Dunantul, which increased its GDP per capita from 20% below the national average in 1990 up to the national average in 2007.
Key challenges	● Regional disparities between east and west. ● Development gap with the EU average. ● Urban rural disparities, severe peripheries. ● Mono-centric town structure.
Objectives of regional policy	● Improvement of territorial competitiveness. ● Territorial convergence (catching up). ● Sustainable territorial development and protection of heritage. ● Territorial integration into Europe. ● Decentralisation and regionalism.
Legal/institutional framework for regional policy[1]	● Act on Regional Development and Physical Planning and lower level regulations. ● National Spatial Development Concept.
Urban policy framework	● No single urban policy document, though it is partly integrated in the National Spatial Development Policy. ● Regulations and national guidelines for local level urban planning.
Rural policy framework[2]	● New Hungary Rural Development Programme.
Major regional policy tools	● Domestic central and decentralised funds (financial allocations with regional development objectives) mainly in the field of job creation, assistance to local governments for infrastructural developments, and improvement of the business environment (industrial parks, incubator houses). ● EU Structural Funds for measures such as the Growth Poles Programme and the Programme for Most Underdeveloped Micro-regions.
Policy co-ordination at central level	● Co-ordination of the Ministry for National Development and Economy. ● National Regional Development Council (inter-ministerial forum).
Multi-level governance between national and sub-national levels	–
Policy co-ordination at regional level (cross-sectoral)	● Regional development councils.
Policy co-ordination at regional level (geographic)	● Regional (NUTS 2), county (NUTS 3, decreasing role), and micro-region (LAU1).
Evaluation and monitoring	● National level: *the Annual Report* and the four-year *Parliamentary Report on Spatial Processes and Implementation of the NSDC*. ● Regional level: evaluations at NUTS 2 regional level solely for EU-related planning.
Future orientations of regional policy	● Strengthen regional level government.

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

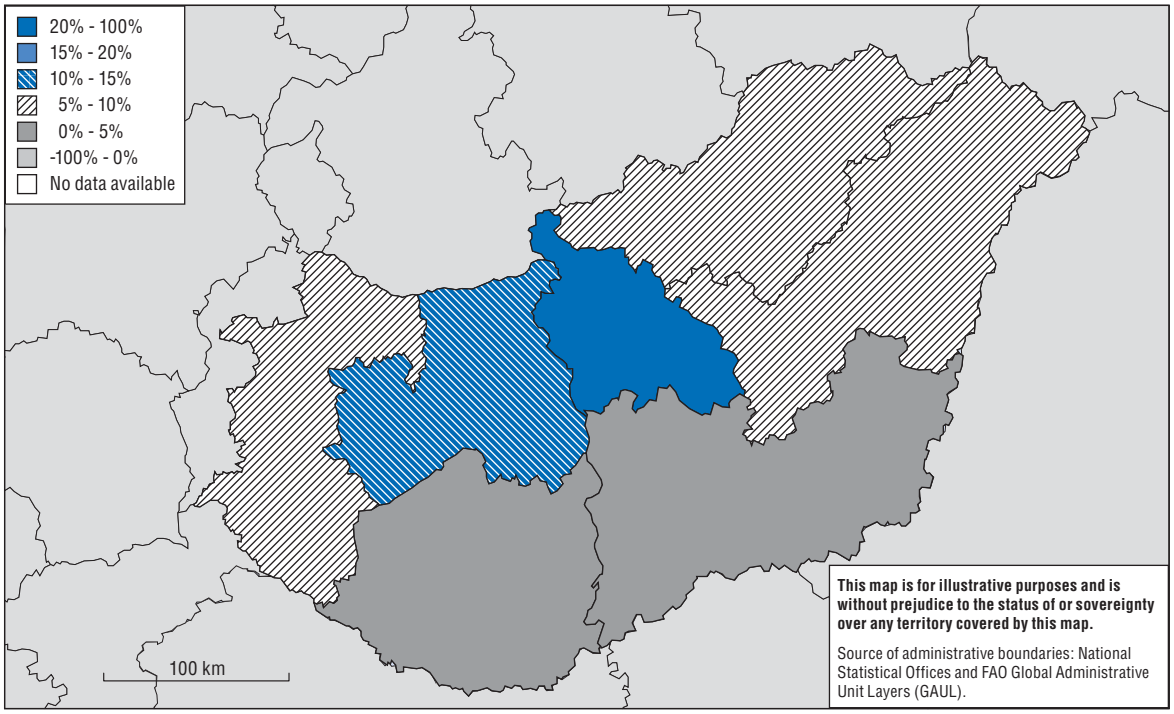
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

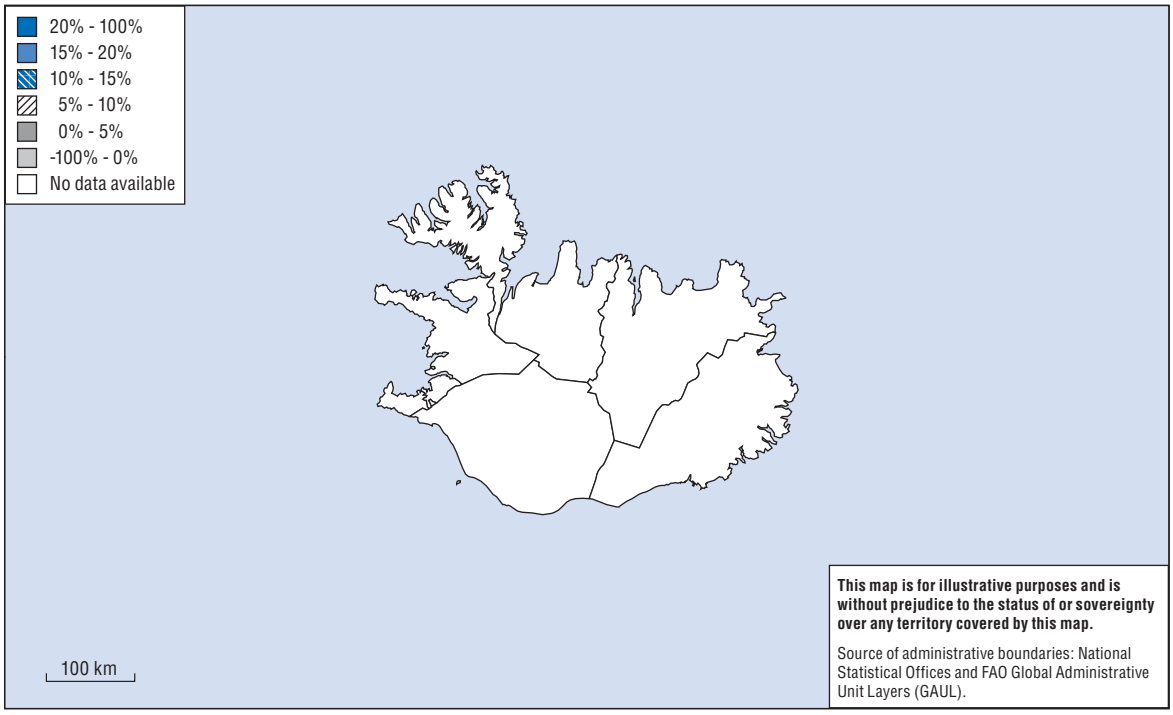
StatLink http://dx.doi.org/10.1787/888932521277

Iceland

Population and territory	● 311 000 inhabitants (2007), 103 001 km^2.
Administrative structure	● Unitary country: ❖ TL2: 2 Regions. ❖ TL3: 8 statistical regions *landsvæ*.
Share of sub-national government in total spending/revenues	● Spending: 27.2% (2009). ● Revenues: 27.6% (2009).
Concentration and inequalities	–
Key challenges	● Depopulation of areas outside of the Capital Region.
Objectives of regional policy	● Avoid regional depopulation. ● Minimise regional disparities. ● Create optimum community conditions for rural areas and ensure the quality of public services in sparsely populated areas.
Legal/institutional framework for regional policy	● Regional Plan.
Urban policy framework	–
Rural policy framework	● Four-year Development Plans with Growth Agreements and Cultural Agreements.
Major regional policy tools	● Institute of Regional Development: credit and financial support for projects in the regions and the operation of eight independent regional development agencies. ● IMPRA – Innovation Centre: soft support for economic activity in the regions and financial support. ● Regional growth agreements. ● Equalisation Fund.
Policy co-ordination at central level	● Co-ordination by the Ministry of Industry, Energy and Tourism and the Institute of Regional Development.
Multi-level governance between national and sub-national levels	● Regional growth agreements.
Policy co-ordination at regional level (cross-sectoral)	● IMPRA facilitates the creation of regional knowledge clusters, gathering several national agencies antennas.
Policy co-ordination at regional level (geographic)	● Municipal mergers.
Evaluation and monitoring	● Institute of Regional Development.
Future orientations of regional policy	● Further streamlining the rather fragmented support system by merging similar services.

Notes: Due to the scarce number of regions, no information on the Gini index and on the performance in time of the regional GDP per capita is provided for this country.

Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

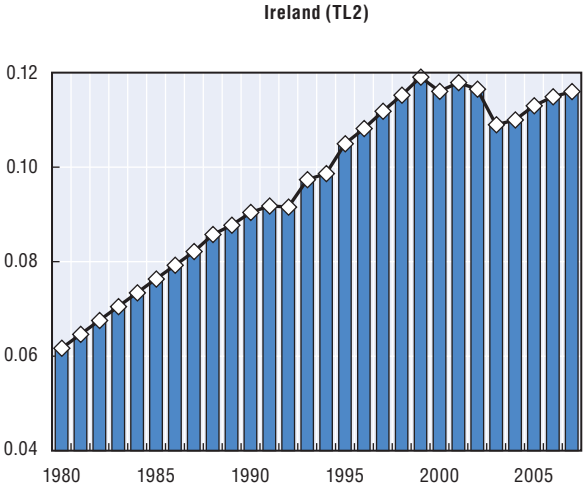
StatLink http://dx.doi.org/10.1787/888932521714

Ireland

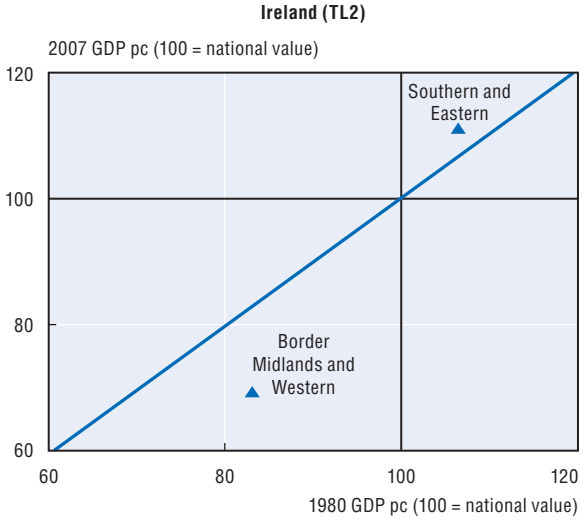
Population and territory	● 4.3 million inhabitants (2007), 93 028 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 2 Groups of Regional Authority Regions. ❖ TL3: 8 *Regional Authority* Regions, among which one predominantly urban region (Dublin, 28% of total population, –0.8 pp over the past two decades) and 7 predominantly rural regions (72%, +0.8pp). Dublin has a unique status as a regional authority, a county council and a city. ❖ 114 local governments or councils, further subdivided into two sub-levels (29 county councils and 5 city councils at the upper level; 80 town authorities at the lower level, including 75 town councils and 5 borough councils).
Share of sub-national government in total spending/revenues	● Spending: 16.7% (2009). ● Revenues: 10.4% (2009).
Concentration and inequalities	● Economic concentration in Ireland among its TL3 regions resembles the OECD average according to the index of geographic concentration. Although concentration in GDP has increased over the past decade, the increase was lower than the average increase in 27 OECD countries. ● Inequality in GDP per capita among Ireland's two TL2 regions has increased from 1980 to 2007. With the exception of the period 2002-03, inequality has been steadily increasing over the 27-year period. ● The increase in inequality in Ireland is driven by a gain of its leading region Southern and Eastern (*e.g.* the region with above average GDP per capita levels) and a decline of its lagging region Border Midlands and Western (*e.g.* the region with below average GDP per capita levels) with respect to the national average over the period 1980-2007. Southern and Eastern increased its 1980 GDP per capita value from 6% over the national value to 11% in 2007, and Border Midlands and Western decreased its 1980 GDP per capita from 17% below the national average to 31% below the average in 2007. ● Despite the increasing gap between Ireland's two TL2 regions, both regions recorded buoyant growth rates and rank among the fastest growing OECD TL2 regions during the period 1995-2005, with annual average GDP per capita growth rates of 6.2% in Border Midlands and Western and 6.8% in Southern and Eastern. Due to Southern and Eastern's larger economy (in GDP share), it has contributed to the bulk (81.3%) of Ireland's overall GDP growth during the past decade, while the remainder is attributed to Border Midlands and Western.
Key challenges	● Persisting regional disparities and urban-rural disparities.
Objectives of regional policy	● Ensure that designated gateway regions maximise their potential for socio-economic development. ● Achieve a better balance between regions. ● Foster enhanced co-ordination in the development of gateways and their regions (in terms of polycentric territorial structure).
Legal/institutional framework for regional policy[1]	● National Development Plan (NDP). ● National Spatial Strategy (NSS).
Urban policy framework	–
Rural policy framework[2]	–
Major regional policy tools	● Gateway Innovation Fund (currently suspended).
Policy co-ordination at central level	● Inter-departmental committee regarding NSS. ● NDP by the Department of Finance. ● NSS by the Department for Environment, Heritage and Local Government.
Multi-level governance between national and sub-national levels	–
Policy co-ordination at regional level (cross-sectoral)	–
Policy co-ordination at regional level (geographic)	–
Evaluation and monitoring	● Annual reporting on NDP to Parliament.
Future orientations of regional policy	● Merger of regional agencies, reduction of local authorities.

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

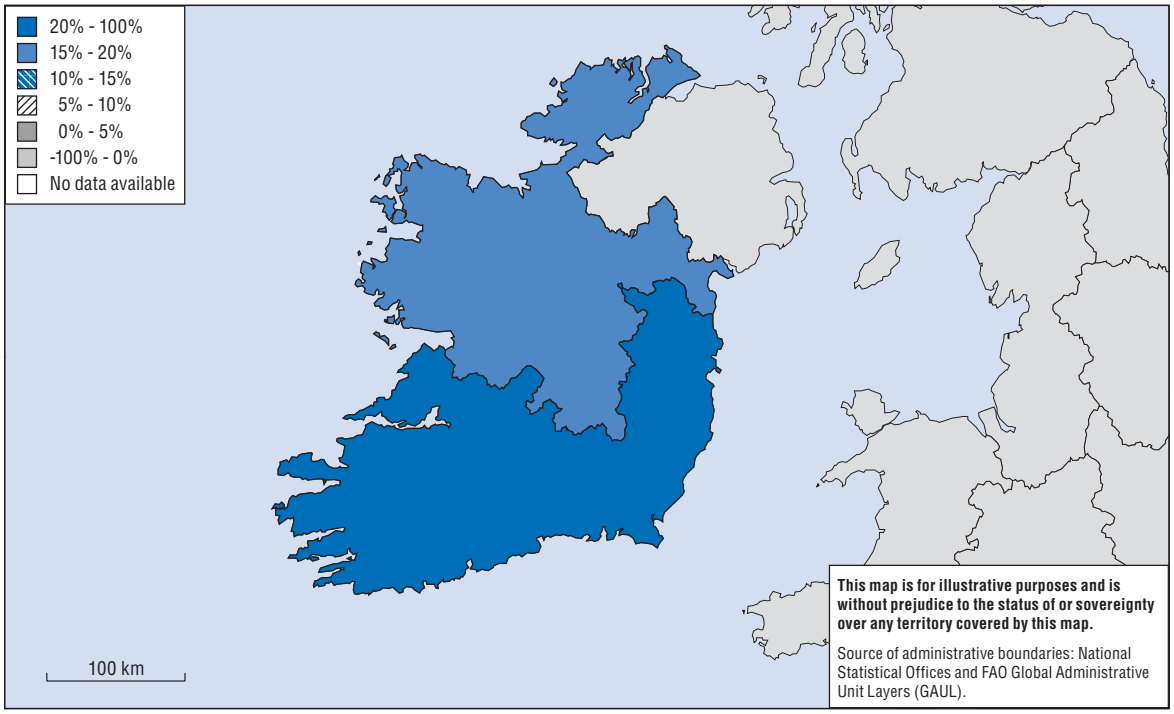
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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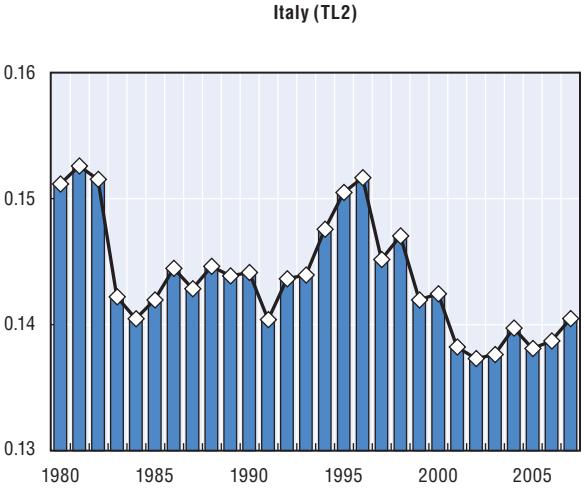
Italy

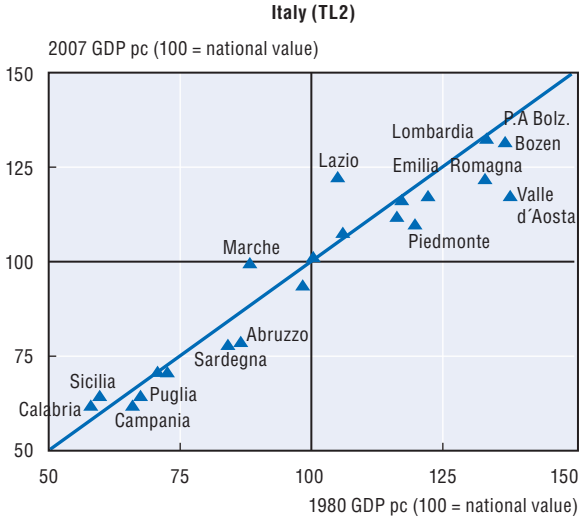
Population and territory	● 60.3 million inhabitants 1 January 2010, ISTAT), 301 328 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system: ❖ TL2: 19 Regions and 2 Autonomous Provinces (Provincia Autonoma Bolzano/Bozen; Provincia autonoma Trento). ❖ TL3: 110 Provinces. ❖ 8 092 municipalities (*comuni*).
Share of sub-national government in total spending/revenues	● Spending: 51% (net of interest and social security) (2009). ● Revenues: 20% (2009).
Concentration and inequalities	● Economic concentration in Italy resembles the OECD average, with 39% of national GDP being produced by 10% of TL3 regions. Approximately 31% of national GDP is produced by the TL2 regions Lombardia (20.6%) and Lazio (10.2%). ● Inequality in GDP per capita among TL2 regions declined from 1980 to 2007. The largest decline occurred during the early 1980s, from 1982-83. Subsequently, inequality fluctuated from 1983 to 1991, and in 1991 it increased gradually up to its highest value in 1995. Since the mid-1990s, inequality declined to its lowest value in 2003, and since 2003 it has been modestly increasing. ● The decline in inequality in Italy is driven by two forces: lagging regions catching up and leading regions underperforming. ● The strong performance of lagging regions Calabria and Sicilia during 1999-2005, with the second (1.6%) and seventh highest (0.7%) growth rates in GDP per capita among Italian TL2 regions, contributed to reducing their gap in GDP per capita levels from 40% and 42% below the national average in the 1980s to 35% and 38% below the national average in 2007. These gaps are still quite significant and comparable to the gaps in Campania and Puglia (38% and 35% below national GDP per capita), Molise (29%) and Basilicata (29%). ● The second force reducing inequality is the relative decline of Valle d'Aosta, Piedmonte and Emilia Romagna, which displayed above average GDP per capita levels and below average GDP per capita growth rates (–0.46%, –0.34% and 0.27% respectively) during 1999-2005. ● In contrast, the strong performance of Lazio (2.1%) and Marche (0.6%) with the fastest and eighth fastest GDP per capita growth over 1999-2005 contributed to an increase in inequality. ● The main drivers of national GDP growth are Lombardia, Lazio and Veneto, which contributed almost half of Italy's GDP growth (22%, 13% and 10% respectively) during the past decade.
Key challenges	● Regional disparities between the north and south (*Mezzogiorno*).
Objectives of regional policy	● Achieve socio-economic rebalancing (Constitution). ● Promote key factors of growth in all regions.
Legal/institutional framework for regional policy[1]	● National Strategic Framework (NSF). ● Regional and National Single Programming Documents (POR, PON, POIN, PAR and PAN).
Urban policy framework	● Within NSF.
Rural policy framework[2]	● National Strategic Plan for Rural Development (Ministry of Agriculture) and NSF (Ministry of Economic Development).
Major regional policy tools	● European Structural Funds and national co-funding. ● Fund for Underutilised Areas (FAS). ● Institutional Agreements and Framework Programme Agreements. ● National Plan for the Development of the South. ● Measurable objectives and targets for essential services, performance reserve system.
Policy co-ordination at central level	● Co-ordination of the Department for Development and Economic Cohesion (DPS) of the Ministry for Economic Development. ● National Committee for the Co-ordination and Monitoring of the Regional Policy.
Multi-level governance between national and sub-national levels	● Institutional Agreements and Framework Programme Agreements. ● National Committee for the Co-ordination and Monitoring of the Regional Policy. ● Performance Reserve System.
Policy co-ordination at regional level (cross-sectoral)	● Integrated regional strategies and programmes.
Policy co-ordination at regional level (geographic)	● Inter-regional operational programmes.
Evaluation and monitoring	● Public Investment Evaluation Unit (within the DPS, Ministry of Economic Development) and the National Evaluation System. ● Regional systems of evaluation and monitoring. ● System of territorial indicators and targets linked to the NSF.
Future orientations of regional policy	● Fiscal federalism reform.

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

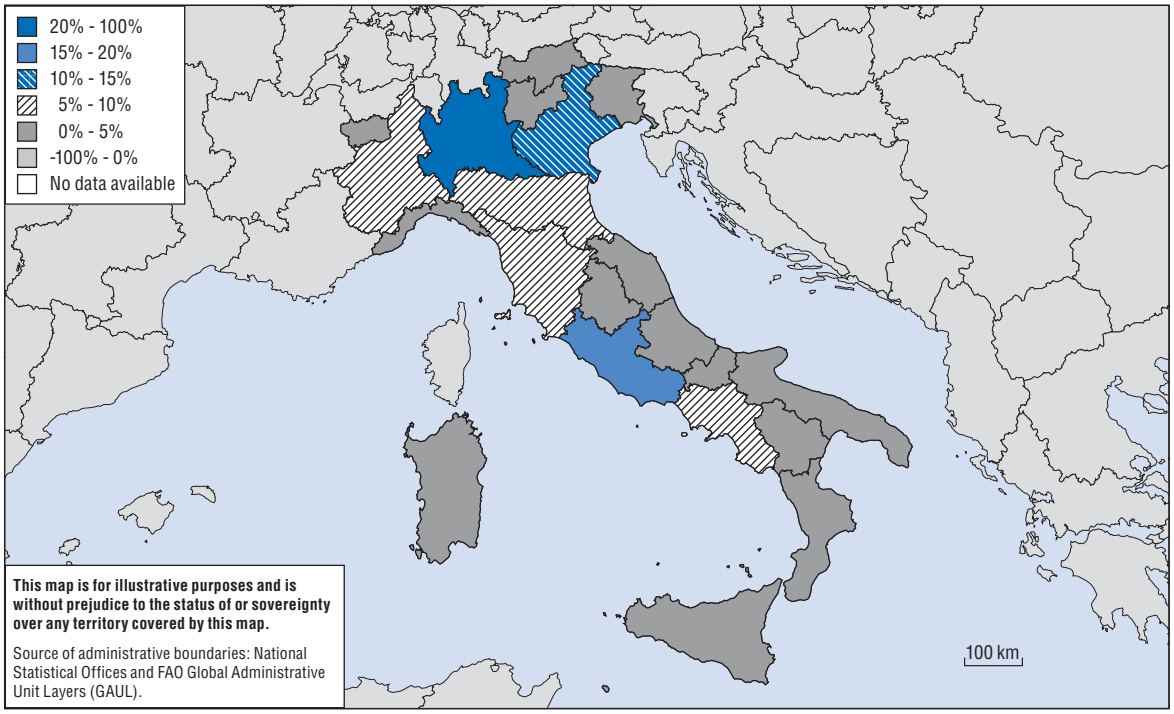
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



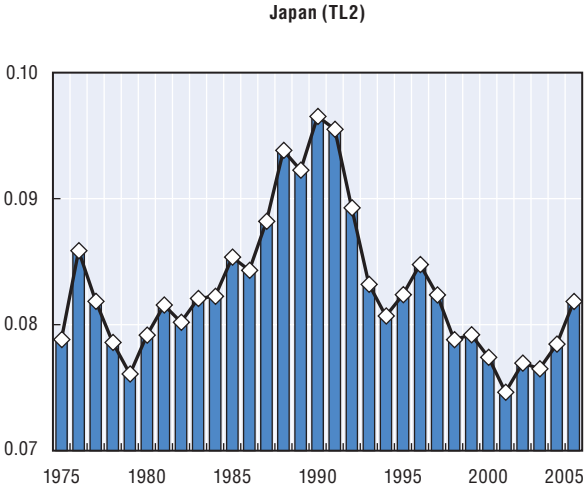
Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521315

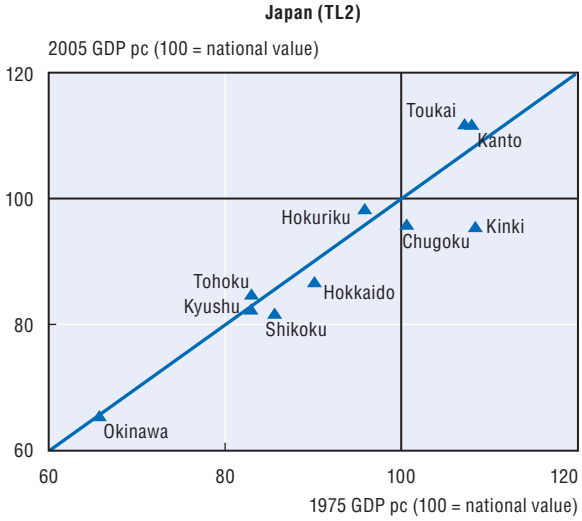
Japan

Population and territory	● 127.8 million inhabitants (2007, the second most populated OECD country), 368 098 km^2 (the ninth largest in the OECD).
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 10 *Groups of prefectures.* ❖ TL3: 47 *Prefectures* (todōfuken), among which 12 predominantly urban regions (55% of total population, +2.7 pp over the past 26 years), 22 intermediate regions (32%, –1.3 pp) and 13 predominantly rural (13%, –1.4 pp). ❖ More than 1 800 municipalities at the local level.
Share of sub-national government in total spending/revenues	● Spending: 31.9% (2006). ● Revenues: 32.9% (2006).
Concentration and inequalities	● Japan's economy is more concentrated than on average in OECD countries, with 40% of national GDP being concentrated in 10% of TL3 regions as opposed to 38% in the OECD. ● Inequality in GDP per capita among TL2 regions has fluctuated over the past 30 years in Japan. From the mid-1970s to the early 1980s inequality declined although from 1974 to 1975 it increased. From the early 1980s to the early 1990s, inequality increased to its highest level in 1991, and over the next decade it declined to its lowest level in 2001. Since 2001, inequality has been increasing. ● Over the past three decades, Kinki experienced the largest change in its relative levels of GDP per capita. The underperformance of Kinki, displaying the lowest GDP per capita growth rate (0.52%) over the past decade among Japanese TL2 regions, has reduced its above average GDP per capita levels in 1975 (8% above the national average) to below average levels in 2005 (4% below the national average). ● Two of Japan's lagging regions, Okinawa and Kyushu, have outperformed the national average in GDP per capita growth rates over the past decade, recording the fourth (1.28%) and the third (1.38%) highest growth rates. In contrast, the lagging regions Shikoku (1.02%) and Hokkaido (0.85%) trail the national average (1.15%) in growth rates. ● The largest contribution to national growth was by Kanto, which contributed 51.8% of the overall national GDP growth during the past decade, followed by Toukai (12.9%), Kyushu (8.6%) and Kinki (7.9%).
Key challenges	● Regional disparities (mono-axis spatial structure). ● Ageing society, decreasing population and the impact on regions. ● Response to global scale environmental problem.
Objectives of regional policy	● Growth of regional blocs based on regional assets.
Legal/institutional framework for regional policy	● National Spatial Planning Act (2005). ● National Spatial Strategy and Regional Spatial Strategies.
Urban policy framework	● City Planning Act (1968). ● Urban Renaissance Law (2002).
Rural policy framework	● Basic Plan on Food, Agriculture and Rural Development (2005).
Major regional policy tools	● Regional support by the Integrated Bureau for Regional Revitalisation. ● Priority Plan for Public Infrastructure. ● Urban Renaissance Programme. ● Comprehensive Public Infrastructure Provision Grant Industrial cluster projects and Knowledge Cluster Initiative. ● Special aid to depopulated areas and other designated areas. ● Local Allocation Tax (fiscal equalisation scheme).
Policy co-ordination at central level	● National Spatial Strategy (National and Regional Planning Bureau).
Multi-level governance between national and sub-national levels	● National Spatial Strategy and regional spatial strategies. ● National and Regional Planning Bureau and regional planning councils.
Policy co-ordination at regional level (cross-sectoral)	● Regional spatial strategies. ● Regional planning councils.
Policy co-ordination at regional level (geographic)	● Regional spatial strategies. ● Regional planning councils. ● Municipality mergers.
Evaluation and monitoring	● Ongoing evaluation on the National and Regional Spatial Strategies.
Future orientations of regional policy	–

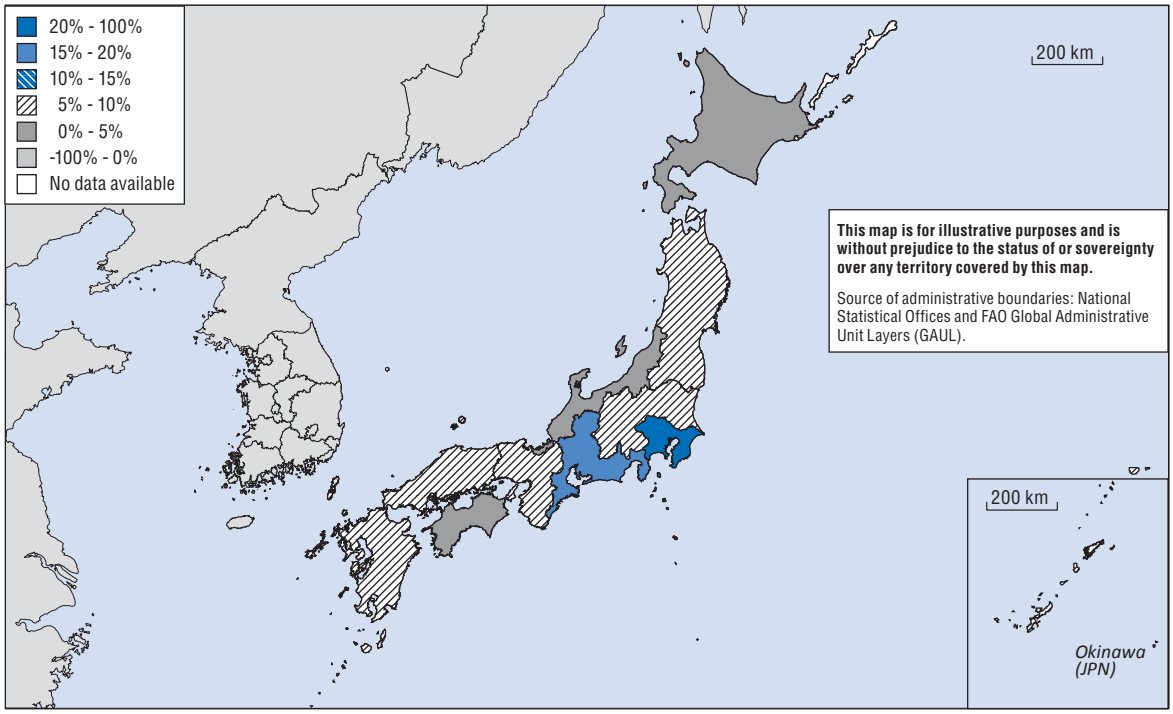
Gini index of inequality of GDP per capita across TL2 regions, 1975-2005



Regional performance in GDP per capita over time, 1975 and 2005



Regional contribution (%) to national GDP growth, 1995-2007



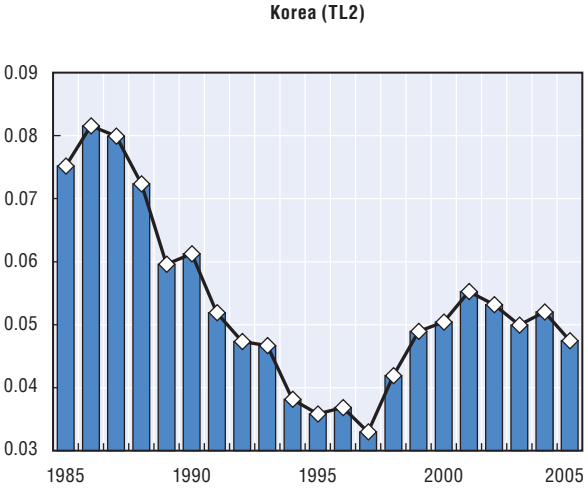
Source: Calculations based on data from Japan Ministry of Internal Affairs and Communications and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521334

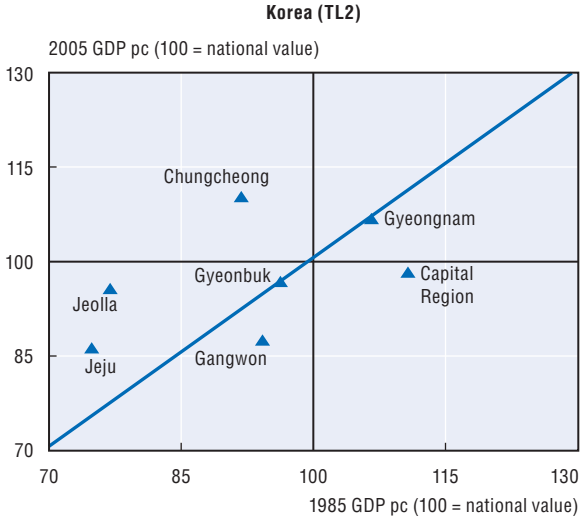
Korea

Population and territory	● 48.4 million inhabitants (2007), 99 461 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 7 *Provinces*. ❖ TL3: 16 TL3 regions, including nine provinces (*do*) + six metropolitan cities (*gwangyeoksi*) + one special city (*teukbyeolsi*); among which 6 predominantly urban regions (45% of total population, +1 pp over the past 26 years), 5 intermediate regions (36%, +10 pp) and 5 predominantly rural (20%, –11 pp). ❖ 75 cities (*si*), 86 counties (*gun*), 69 autonomous districts (*gu*).
Share of sub-national government in total spending/revenues	● Spending: 44.5% (2009). ● Revenues: 17.1% (2009).
Concentration and inequalities	● Korea displays the fourth highest index of geographic concentration of GDP among TL3 regions in OECD countries. More than 40% of the national GDP is produced in only two (Seoul and Gyeonggi) of Korea's 16 TL3 regions. ● Inequality in GDP per capita among TL2 regions has declined in Korea from 1985 to 2005. During the mid-1980s to the mid-1990s inequality decreased significantly, from 1996 to 2001 it increased back to the levels of the early 1990s, and since 2001 inequality has fluctuated and seems to be dropping progressively. ● The decline in inequality has been driven by a catching up process of the lagging regions, Chungcheong recording above average growth rates in GDP per capita over the past decade. Chungcheong recorded the fastest rate of growth among Korea's TL2 regions, reducing its GDP per capita gap and even surpassing the national average over a 20-year period, from 8% below the national average in 1985 to 10% above the average in 2005. ● Gangwon has fallen further behind over the past two decades, displaying the third lowest GDP per capita growth rate in the last 10 years. Its level of GDP per capita in 2005 was 18% below the national average. ● The weak performance of the Capital Region has also contributed to the decline in inequality, with the lowest growth rate in GDP per capita (2.83%) over the past decade. As a result, its level of GDP per capita has declined from 11% above the average in 1985 to 2% below the average in 2005. ● Despite the Capital Region's underperformance, due to its large size (measured by GDP share) its contribution to national GDP growth over the past decade is quite significant, almost 50% (47.7%). Gyeongnam, Chungcheong, Gyeongbuk and Jeolla also contributed considerably to national GDP growth over the past decade, with respective values of 17.1%, 13.5%, 10.8% and 8.8%.
Key challenges	● Weak competitiveness. ● Regional disparities.
Objectives of regional policy	● Establishment of economic regions. ● Regional development based on specialisation. ● Decentralisation and local autonomy. ● Inter-regional co-operation and collaborative development.
Legal/institutional framework for regional policy	● Framework Act on the National Territory (2002). ● Special Act on Balanced National Development (2004). ● Comprehensive National Territorial Plan (2011-20). ● Five-year Regional Development Plan (2009-13).
Urban policy framework	–
Rural policy framework	● Creative regions (currently under discussion). ● Five-year Plan for Improving Rural Quality of Life (2010-14).
Major regional policy tools	● Regional Development Special Account. ● Tax reduction (incentive).
Policy co-ordination at central level	● Presidential Committee on Regional Development (since 2009). ● Co-ordination of the Ministry of Land, Transport and Maritime Affairs (MLTM). ● Comprehensive National Territorial Plan, five-year plans for regional development.
Multi-level governance between national and sub-national levels	● Comprehensive National Territorial Plan, five-year plans for regional development.
Policy co-ordination at regional level (cross-sectoral)	● Economic Region Development Committee. ● City/Province Development Committee.
Policy co-ordination at regional level (geographic)	● Economic regions. ● Metropolitan City Plan. ● Metropolitan Development Project Plan.
Evaluation and monitoring	● Annual Performance Assessment of Five-year Regional Development Plan.
Future orientations of regional policy	● Green growth. ● Re-organisation of administrative districts.

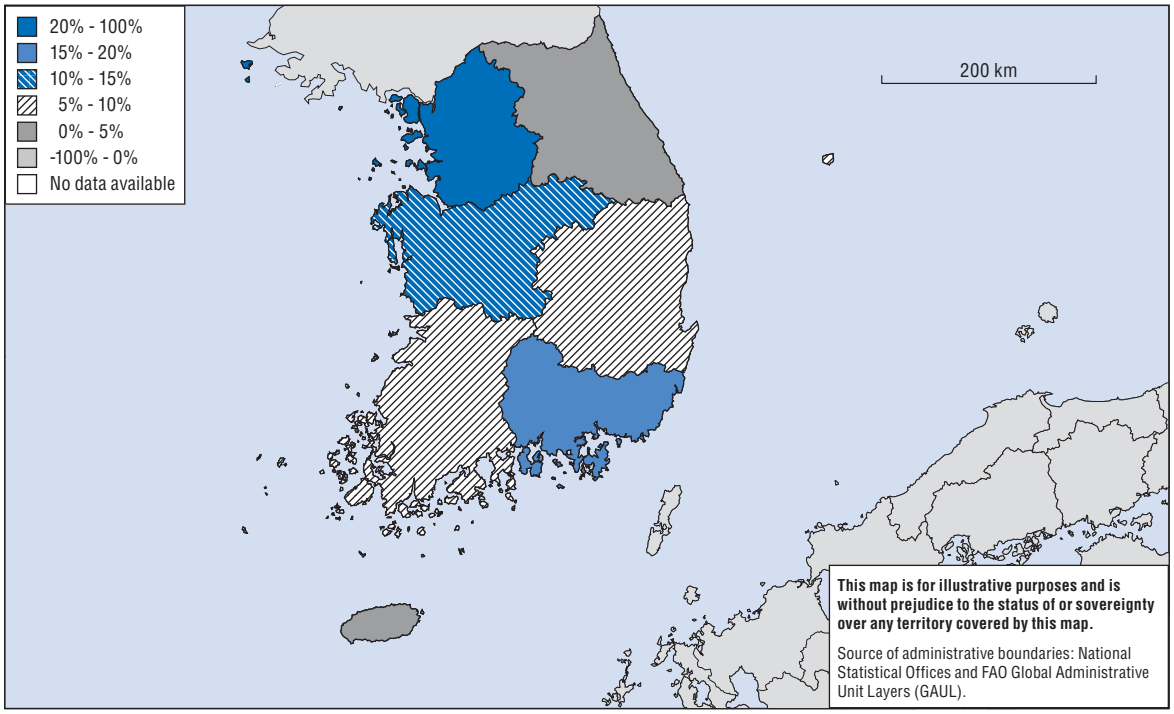
Gini index of inequality of GDP per capita across TL2 regions, 1985-2005



Regional performance in GDP per capita over time, 1985 and 2005



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on data from Korea National Statistical Office and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521353

Luxembourg

Population and territory	● 480 000 inhabitants (2007), 2 586 km^2.
Administrative structure	● Unitary country: ❖ TL2: data not available ❖ TL3: data not available ❖ 116 municipalities.
Share of sub-national government in total spending/revenues	● Spending: 11.8% (2009). ● Revenues: 6.6% (2009).
Concentration and inequalities	
Key challenges	● Lack of economic diversification. ● Centralisation of economic activities in the centre of the country. ● Cross-border traffic congestion. ● Rural municipalities which are recently experiencing substantial ex-urban development.
Objectives of regional policy	● Increase competitiveness. ● Preserve territorial cohesion. ● Sustainable development.
Legal/institutional framework for regional policy[1]	● Master Programme for Territorial Development (*Programme directeur d'aménagement du territoire*). ● Integrated Transport and Spatial Development Concept. ● Regional plans. ● Primary and secondary sectoral plans. ● European Grouping of Territorial Co-operation (EGCC).
Urban policy framework	● National Information Unit for Urban Policy (*cellule nationale d'information pour la politique urbaine*, CIPU). ● Conventionalised informal agreements.
Rural policy framework[2]	● Nature parks.
Major regional policy tools	● Economic activity zones. ● Cluster programme, business parks. ● Grants of State Aid Commission. ● Commune Financial Grant Funds.
Policy co-ordination at central level	● Co-ordination of the Ministry for Sustainable Development and Infrastructures. ● Master Programme for Territorial Development. ● Inter-ministerial Committee for Territorial Planning. ● Superior Council for Territorial Planning.
Multi-level governance between national and sub-national levels	● Regional plans. ● Informal agreement between state and municipalities.

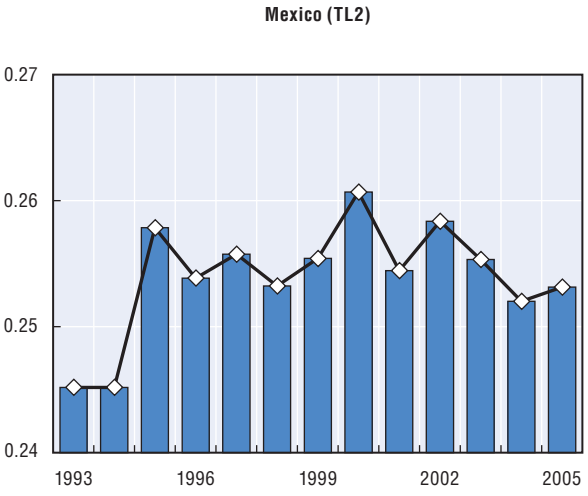
Policy co-ordination at regional level (cross-sectoral)	• Regional plans.
Policy co-ordination at regional level (geographic)	• Regional plans. • Informal agreement between state and municipalities. • European Grouping of Territorial Co-operation (EGCC).
Evaluation and monitoring	• Establishment of territorial observatory.
Future orientations of regional policy	• Territorial and administrative reform (*e.g.* abolition of cantons and districts, introduction of urban communities [*communautés urbaines*]).

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.
3. Due to the scarce number of regions, no information on the regional contribution to growth, on the Gini index and on the performance in time of the regional GDP per capita is provided for this country.

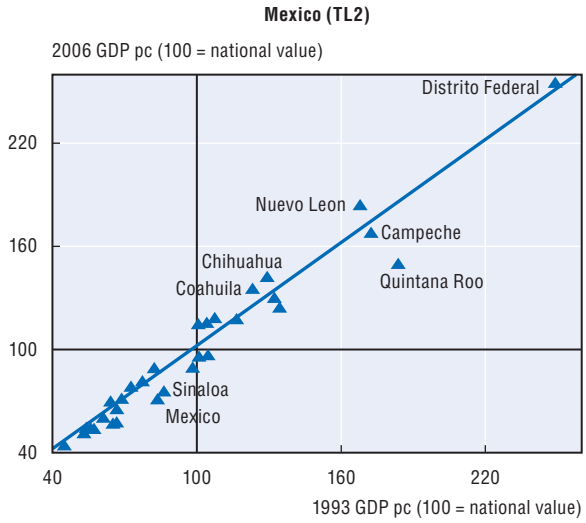
Mexico

Population and territory	● 106 million inhabitants (2007), 1.9 million km^2.
Administrative structure	● Federal country. ● Two-tiered sub-national system: ❖ TL2: 32 (31 states and 1 federal district (Mexico City). ❖ TL3: 209 *Grupos de municipios*, among which 34 predominantly urban regions (47% of total population, +2.4 pp over the past 15 years), 30 intermediate regions (17%, –0.2 pp) and 145 predominantly rural (36%, –2.2 pp). ❖ 2 456 municipalities.
Share of sub-national government in total spending/revenues	● Spending: 48.2% (2010) ● Revenues: 9.2% (2010)
Concentration and inequalities	● Mexico's economy is more concentrated than on average in OECD countries; approximately by 30% more according to the index of geographic concentration among TL2 regions. Moreover, around one third (32%) of national GDP is concentrated in only two (Mexico and Distrito Federal) of Mexico's 32 TL2 regions. ● Inequality in GDP per capita among Mexico's TL2 regions has increased from 1993 to 2005. ● Mexico's level of inequality in GDP per capita among TL2 regions is one of the highest among OECD countries. Distrito Federal displays the highest level of GDP per capita, exceeding the national value by 149%, and Chiapas records the lowest, below 60% of the national value. Only Turkey has regions with a lower percentage value than Mexico and only the United Kingdom, the United States, Turkey and France have regions with a higher percentage value. ● The increase in inequality in Mexico is driven by two forces. The first is the presence of regions with higher initial levels of GDP per capita than the national average and higher growth rates over the past decade such as Distrito Federal (2.5%), Nuevo Leon (2.7%) and Chihuahua (2.6%). The second is driven by regions lagging in GDP per capita levels and growing slower than the national average. These regions are Sinaloa (1.98%) and Mexico (1.02%). ● A decline in inequality is also possible when lagging regions are catching up and when leading regions underperform. In Mexico, there are no visible regions catching up, and the leading region Quintana Roo has been underperforming in GDP per capita growth displaying the 6th lowest growth rate (1.34%) among Mexican TL2 regions. ● The largest contribution to national growth in GDP over 1995-2004 was from regions bordering the United States, contributing to 29% of national GDP growth (Baja California Norte, Nuevo Leon, Sonora, Chihuahua and Tamaulipas), followed by the metropolitan region Distrito Federal and its surrounding region Mexico, contributing 27% of the national growth, and finally by Jalisco (6.3%).
Key challenges	● Regional disparities and lack of competitiveness and legal changes.
Objectives of regional policy	● Regional balance, competitiveness and regional cohesion.
Legal/institutional framework for regional policy	● Federal Law of Planning and planning system. ● General Law of Human Settlements (LGAH).
Urban policy framework	● General Law of Human Settlements. ● Urban Development and Territory Organisation National Programme (PNDUOT).
Rural policy framework	● Law on Sustainable Rural Development (LSRD) (2001). ● Special Concerted Rural Development Programme (PEC).
Major regional policy tools	● National Development Plan (PND) 2007-12. ● Regional Trust Fund (*Fideicomisos para el desarrollo regional*) and meso-regions. ● Regional Development Programme. ● Development for Priority Areas Programme (formerly Micro-Regions Programme). ● National System of Fiscal Co-ordination.
Policy co-ordination at central level	● Ministry for Finance and Public Credit (SHCP). ● Ministry of Social Development (SEDESOL); Law on Sustainable Rural Development (LSRD) (2001) (rural).
Multi-level governance between national and sub-national levels	● Decentralisation agreements (*convenios – CUD*). ● Planning system. ● Regional Development Programme.
Policy co-ordination at regional level (cross-sectoral)	● Ministry for Finance and Public Credit (SHCP). ● Ministry of Social Development (SEDESOL).
Policy co-ordination at regional level (geographic)	● State Planning Committee for Development (COPLADE). ● 4 Meso-regions and Regional Trust Fund (Fidcentro, Fiderco, Fidenoreste and Fidesur). ● Inter-municipal associations (mainly at urban level).
Evaluation and monitoring	● External assessment of all public programmes: Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL) and Auditoría Superior de la Federación (ASF). ● SEDESOL evaluation.
Future orientations of regional policy	● National Strategy of Regional Development (under discussion).

Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007

Source: Calculations based on *OECD Regional Database* (2009).

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Netherlands

Population and territory	● 16.4 million inhabitants (2007), 33 783 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 4 *Landsdelen*. ❖ TL3: 12 *Provinces*, among which 7 predominantly urban regions (85% of total population, –5.9 pp) and 5 intermediate regions (15%). ❖ 443 municipalities (*gemeenten*).
Share of sub-national government in total spending/revenues	● Spending: 34.4% (2009). ● Revenues: 11.1% (2009).
Concentration and inequalities	● The Netherlands have the third lowest index of geographic concentration of GDP in the OECD. Only 26% of national GDP is produced in 10% of the Netherlands' TL3 regions as opposed to 38% in the OECD. ● Inequality in GDP per capita between the Netherlands' TL2 regions decreased from 1980 to 2005. During the early 1980s inequality remained fairly stable until the mid-1980s, experiencing the largest decline in 1986 and 1987. Since 1987, inequality has remained fairly stable and experienced a gradual increase since 1994. ● The drop in inequality in the Netherlands is driven by two forces, the falling behind of the leading region Noord-Netherland during the period 1980-2007 and the catching up of the lagging region Zuid-Netherland. ● Zuid-Netherland's strong economic performance over the past decade, recording the fastest GDP per capita growth rate among TL2 regions (1.35%), increased its GDP per capita level from 16% below the national average in the 1980s to its current value of only 1% below national standards. Consequently it has contributed to more than one fifth (22.4%) of the overall national GDP growth during the past decade. ● In contrast, the underperformance of Noord-Netherland also contributed to a decline in inequality, albeit undesirable, by growing slower than the national average (1.01% as opposed to the national rate of 1.05%) in GDP per capita growth rates over the period 1995-2005. Consequently, it lowered its GDP per capita from 32% above the average in the 1980s to its current level of 13% below the average. ● West-Netherland has maintained its higher level of GDP per capita and even increased it from 6% above the average in 1980s to 11% in 2007. Due to its strong performance and large size, West-Netherland has contributed more than 50% (51%) of the overall national GDP growth over the past decade.
Key challenges	● Reduced growth performance.
Objectives of regional policy	● Stimulate economic growth in all regions.
Legal/institutional framework for regional policy[1]	● Peaks in the Delta (2004). ● Spatial Strategy Plan (2006).
Urban policy framework	● National Urban Policy based on block grant and five-year contracts (2005-09).
Rural policy framework[2]	● Agenda for the Living Countryside (2004) based on block grant and seven-year contracts (2007-13). ● National Spatial Strategy (2004). ● National Rural Development Plan.
Major regional policy tools	● Peaks in the Delta programmes. ● *Besluit Subsidies Regionale Investeringsprojecten* (BSRI).
Policy co-ordination at central level	● Spatial Economic Policy Directorate of the Ministry of Economic Affairs. ● Regional Programme Commission. ● Regional Minister (the Randstad).
Multi-level governance between national and sub-national levels	● Regional Programme Commission. ● Regional Peaks Team.
Policy co-ordination at regional level (cross-sectoral)	● Regional Programme Commission. ● Regional Peaks Team.
Policy co-ordination at regional level (geographic)	● City region-based on joint Arrangement Act plus (WGR plus-regions). ● Municipality merger.
Evaluation and monitoring	● Regulation on policy implementation and evaluation.
Future orientations of regional policy	● Decentralisation.

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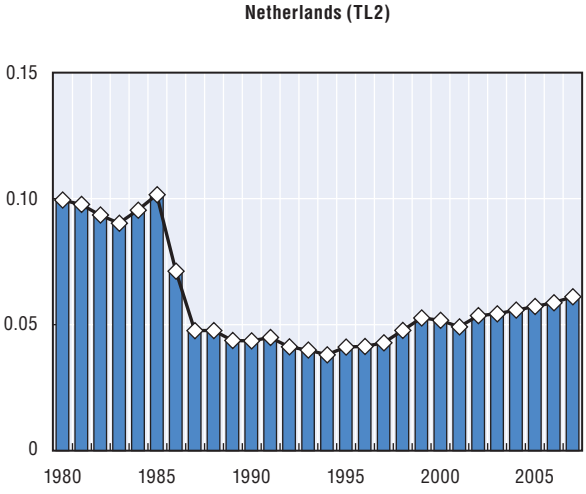
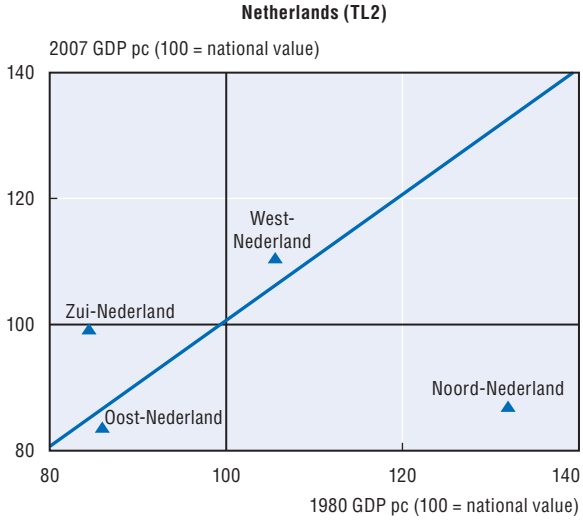
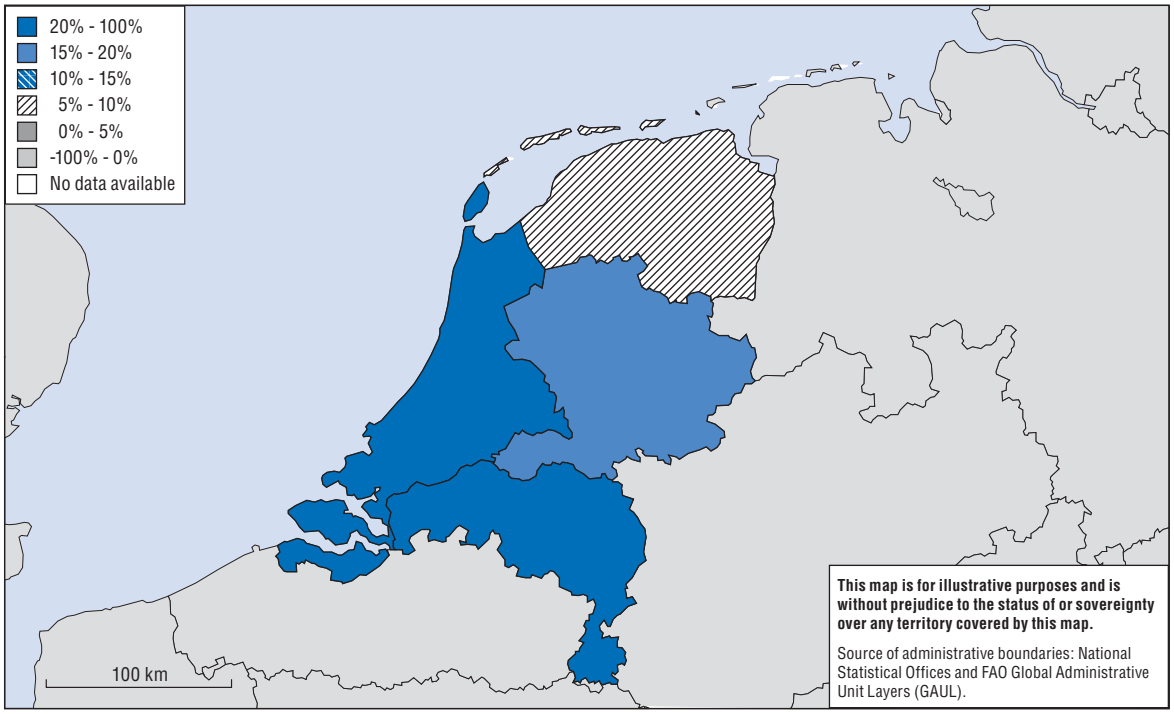
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1997-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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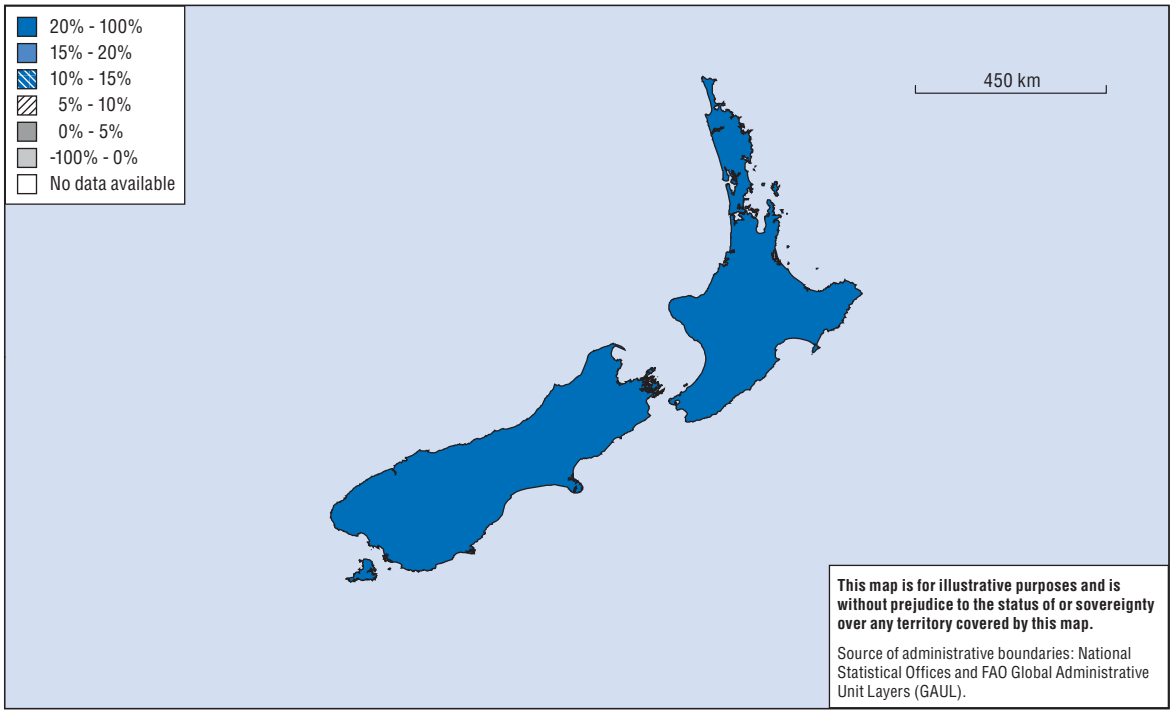
New Zealand

Population and territory	● 4.2 million inhabitants (2007), 268 021 km^2.
Administrative structure	● Unitary country: ❖ TL2: 2 Groups of regional councils. ❖ TL3: 14 Regional councils.
Share of sub-national government in total spending/revenues	● Spending: 11.9% (2009). ● Revenues: 9.6% (2009).
Concentration and inequalities	–
Key challenges	● Regions are not always able to achieve the necessary strategic, outward focus (without support from central government) because of the difficulties of bringing together a wide range of diverse actors.
Objectives of regional policy	● Improve regional business environment. ● Encourage cross-region collaboration.
Legal/institutional framework for regional policy	● Regional economic development strategies.
Urban policy framework	–
Rural policy framework	–
Major regional policy tools	● Regional Strategy Fund (RSF). ● Enterprising Partnership Fund (EPF). ● TechNZ Business Investment Programme. ● Infrastructure investment such as Broadband and Cycleway.
Policy co-ordination at central level	● Co-ordination of the Ministry of Economic Development (MED).
Multi-level governance between national and sub-national levels	● Regional economic development strategies.
Policy co-ordination at regional level (cross-sectoral)	● Regional economic development strategies. ● Co-ordination of New Zealand Trade and Enterprise (NZTE). ● Regional councils/economic development agencies.
Policy co-ordination at regional level (geographic)	● 14 regions covering all of New Zealand (through the consolidation of regions from 26 to 14 [2007]).
Evaluation and monitoring	–
Future orientations of regional policy	● Future policies are likely to focus on nationally significant regional projects and strategies, rather than on specific regions.

Notes: Due to the scarce number of regions, no information on the Gini index and on the performance in time of the regional GDP per capita is provided for this country.

Regional contribution (%) to national GDP growth, 2000-03



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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Norway

Population and territory	● 4.7 million inhabitants, 304 281 km^2.
Administrative structure	● Unitary country (constitutional monarchy). ● Two-tiered sub-national system: ❖ TL2: 7 *Landsdelen*. ❖ TL3: 19 *Fylker*, among which one predominantly urban region (Oslo og Akershus, 12% of total population, +0.9 pp over the past 18 years), 5 intermediate regions (40%, +2.1 pp) and 13 predominantly rural regions (49%). ❖ 434 municipalities (*kommuner*).
Share of sub-national government in total spending/revenues	● Spending: 32.6% (2009). ● Revenues: 15.1% (2009).
Concentration and inequalities	● Norway's economy is approximately 30% more concentrated than OECD average. Almost one fourth (22%) of Norway's GDP is produced in only one (Oslo) of its 19 TL3 regions. ● Inequality in GDP per capita among TL2 regions increased from 1980 to 2007. From the early 1980s to the early 2000s inequality increased steadily each year except from 1993 to 1994. Starting from 2000, inequality declined for two years and since 2003 it has been increasing again. ● Norway's increase in inequality is driven by Oslo og Akershus's strong economic performance, increasing its lead relative to other TL2 regions, and the falling behind of Agder og Rogaland, Sør-Østlandet and Nord-Norge. ● Over the past decade, Oslo og Akershus's GDP per capita grew faster (2.5%) than the national average (2.3%), increasing its level of GDP per capita further above the national average. Over the period 1980 to 2007, Oslo og Akershus's GDP per capita increased from 7% above the national average to 55%. ● The underperformance of Sør-Østlandet, Nord-Norge and Agder og Rogaland, recording the lowest (1.48%), second lowest (1.94%) and third lowest (2.22%) GDP per capita growth rates over the period 1995-2005, has pushed their GDP per capita levels below national standards. In 1980, Agder og Rogaland and Sør-Østlandet displayed above average GDP per capita levels (18% and 3% respectively) and 27 years later they fell below national average by 14% and 19% respectively. Nord-Norge's GDP per capita lagged only by 2% and in 2007 it declined to 26% below the national average. ● Despite the underperformance of Agder og Rogaland and Sør-Østlandet, their combined contribution to Norway's overall GDP growth over the period 1995 to 2005 exceeded one fifth (26%). The main drivers of national growth during this period are led by Oslo og Akershus (39%) and Vestlandet (17%).
Key challenges	● Sparse population across much of the country. ● Population decrease in rural/peripheral areas. ● Accessibility: long distances, difficult topography, and weather exposed transport; lack of proximity to larger labour markets and services in peripheral areas. ● Mono-sector economic structure in many areas. ● Tax revenue disparities and cost differences in public service provision across municipalities and counties.
Objectives of regional policy	● Ensure a real, independent choice in where to live. ● Provide equal living conditions across the country. ● Develop regional strengths and utilise the potential of all parts of the country. ● Maintain the main features of the settlement pattern (territorial structure).
Legal/institutional framework for regional policy[1]	● 2009 White Paper on regional policy (every four years). ● White Papers on transport, innovation, agriculture, etc.; action plans on female entrepreneurship; entrepreneurships in education, etc. ● Annual budgets and guidelines. ● Planning and Building Act (1985, recently revised), Local Government Act (1992), and sectoral legislations, rules and regulations. ● Regional plans and strategies.
Urban policy framework	● 2007 White Paper on the Capital Region (Oslo). ● 2003 White Paper on greater cities in Norway (six cities).
Rural policy framework[2]	● 2009 White Paper on regional policy (every four years). ● Part of agricultural and transport policy.
Major regional policy tools	● Broad regional policy (*e.g.* accessibility, public service provision). ● Priority of rural/peripheral areas in transport, broadband, higher education, agriculture, etc. ● Action zone in North Troms and Finnmark (various measures). ● Block grant/General Purpose (redistribution) Grant Scheme. ● Extra grants to small/peripheral municipalities and to North Norway counties, municipalities and Namdalen. ● State localisation policy. ● Narrow regional/rural development policy (entrepreneurship, innovation, competence, networks, place of attractiveness, etc.). ● Geographically differentiated social security tax (the most important instrument). ● Geographically differentiated state regional development grants to counties. ● State schemes and programmes like Norwegian Centres of Expertise and capacity building at regional and local level (recently launched). ● Norwegian Centre for Rural Development (since 2008).
Policy co-ordination at central level	● Co-ordination of regional and rural policy by the Ministry of Local Government and Regional Development. ● Cabinet sub-committee on rural and regional policy. ● Inter-ministerial collaboration, working groups, hearings, etc.
Multi-level governance between national and sub-national levels	● Ministry of Local Government and Regional Development's consultation body with the municipal sector. ● Government's annual contact conference with the counties. ● Ministry's participation in meetings with county heads of regional development, of industrial development, etc. ● Innovation Norway's (national agency at regional level) participation in regional partnerships. ● A number of sectoral meeting points between the national and the regional levels, for example on national transport plans, regional research, agriculture, etc.
Policy co-ordination at regional level (cross-sectoral)	● Regional plans and strategies. ● Regional partnerships.

Policy co-ordination at regional level (geographic)	● Regional plans and strategies. ● Inter-municipal and inter-county co-operative bodies.
Evaluation and monitoring	● Regular on-going and *ex post* evaluations of all main measures and bodies. ● Annual reports from state implementation bodies and counties on inputs, activities and results. ● KOSTRA information system/database for municipalities and counties.
Future orientations of regional policy	● Implementation of regional decentralisation reform.

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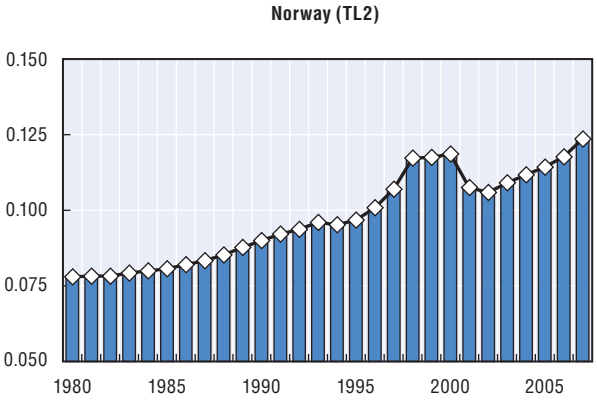
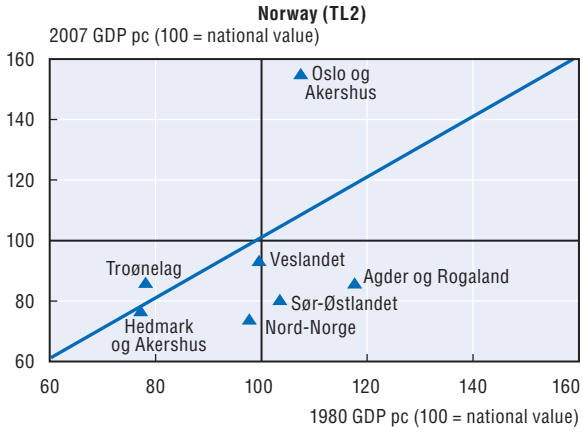
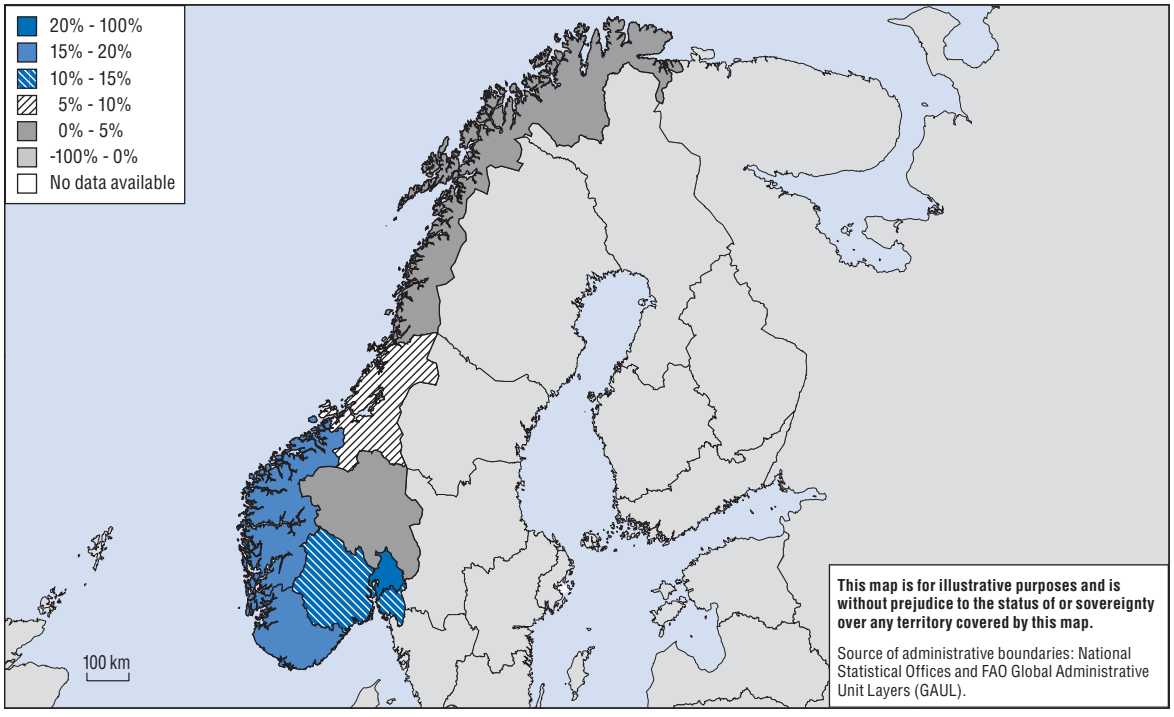
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521410

Poland

Population and territory	● 38 million inhabitants, 312 685 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system: ❖ TL2: 16 *Województwa*. ❖ TL3: 66 *Podregiony*, among which 12 predominantly urban regions (23% of total population), 20 intermediate regions (31%) and 34 predominantly rural regions (43%). ❖ 314 counties (powiaty). ❖ 2 478 municipalities (gminy), further sub-divided into 307 urban municipalities, 1 587 rural municipalities and 584 mixed municipalities. Among urban municipalities 65 of them have a county statute, including Warsaw.
Share of sub-national government in total spending/revenues	● Spending: 33.3% (2009). ● Revenues: 18.1% (2009).
Concentration and inequalities	● Poland's economy is less concentrated than the OECD average according to the index of geographic concentration among TL3 regions. Nonetheless, close to one fifth of the national output (16.8%) is produced by the capital region Mazowiekie, one of Poland's 16 TL2 regions. ● Inequality in GDP per capita among Poland's TL2 regions has increased steadily in 1990-2007. In fact, it increased in all years except in 2001-03. ● Poland's increase in inequality is driven by its leading region (Mazowiekie) gaining relative to other TL2 regions and by its lagging regions falling further behind (Lubelskie, Podkarpackieand and Warminsko-Mazurskie). ● Mazowiekie has outperformed the national average, recording the fastest annual average growth in GDP per capita (6.6%) over the period 1995-2005 and increasing its GDP per capita level further above national standards from 17% above the average in 1990 to 58% in 2007. ● Lagging regions contributing to inequality by falling further behind national standards include Lubelskie, Podkarpackie and Warminsko-Mazurskie, which recorded the second (2.9%), fourth (3.3%) and eighth lowest (3.9%) GDP per capita growth rates during 1995-2005 among TL2 Polish regions. The lower than average growth rates increased their GDP per capita gap levels over the period 1990-2007 from 14% below the national average to 36% for Lubelskie, from 19% below the average to 36% for Podkarpackie, and from 2% below the average to 26% for Warminsko-Mazurskie. ● Over the past 17 years the only Polish region with a visible pattern of convergence is Wielkopolskie, which increased its GDP per capita level from 9% below the national average in 1990 to 11% to above the average in 2007.
Key challenges	● Under-utilised endogenous potential of the regions and lack of efficient mechanisms of growth diffusion from cities (metropolitan areas) to rural areas. ● Increasing intra-regional (urban-rural) and inter-regional (west-east) disparities.
Objectives of regional policy	● Create conditions to increase the competitiveness of all regions, so as to better promote regional cohesion and balance (NSRF).
Legal/institutional framework for regional policy[1]	● National Development Strategy (NDS) (2007-15). ● Law on the Principles of Development Policy (2006). ● Law on the *Voivodship* self-government. ● National Regional Development Strategy (NSRD). ● National Spatial Strategy.
Urban policy framework	● None (currently being discussed).
Rural policy framework[2]	● Rural Development Strategy 2007-13.
Major regional policy tools	● Regional investment aid. ● Special economic zone. ● Regional contracts. ● Diverse supports of special institutions at central and regional level agencies. ● National sectoral programmes.
Policy co-ordination at central level	● Co-ordination by the Ministry for Regional Development (MRR).
Multi-level governance between national and sub-national levels	● Regional contracts.
Policy co-ordination at regional level (cross-sectoral)	● Regional self-governments (*voivodships*).
Policy co-ordination at regional level (geographic)	● Regional self-governments (*voivodships*).
Evaluation and monitoring	● Establishment of evaluation plans and evaluation units, mainly stimulated by EU policy.
Future orientations of regional policy	● National Regional Development Strategy (NSRD), including an enhanced role of place-based regional policy, further decentralisation, territorial contracts, financial integration of national resources and sectoral programme co-ordination.

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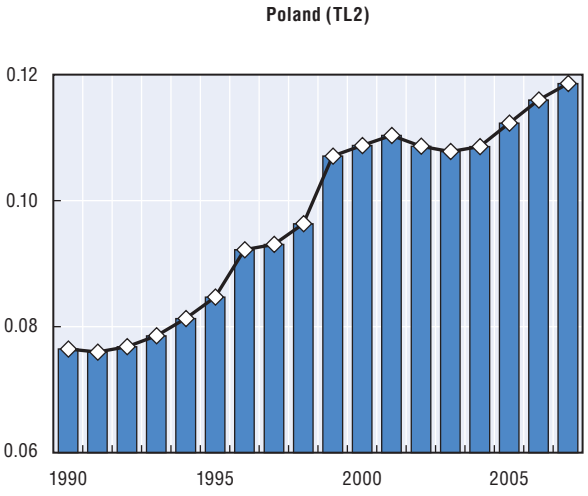
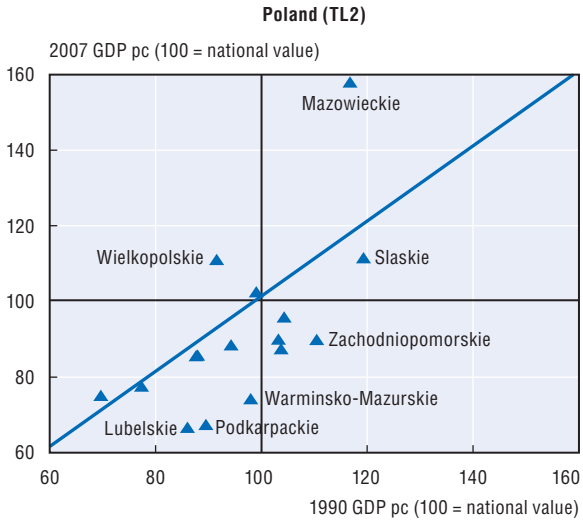
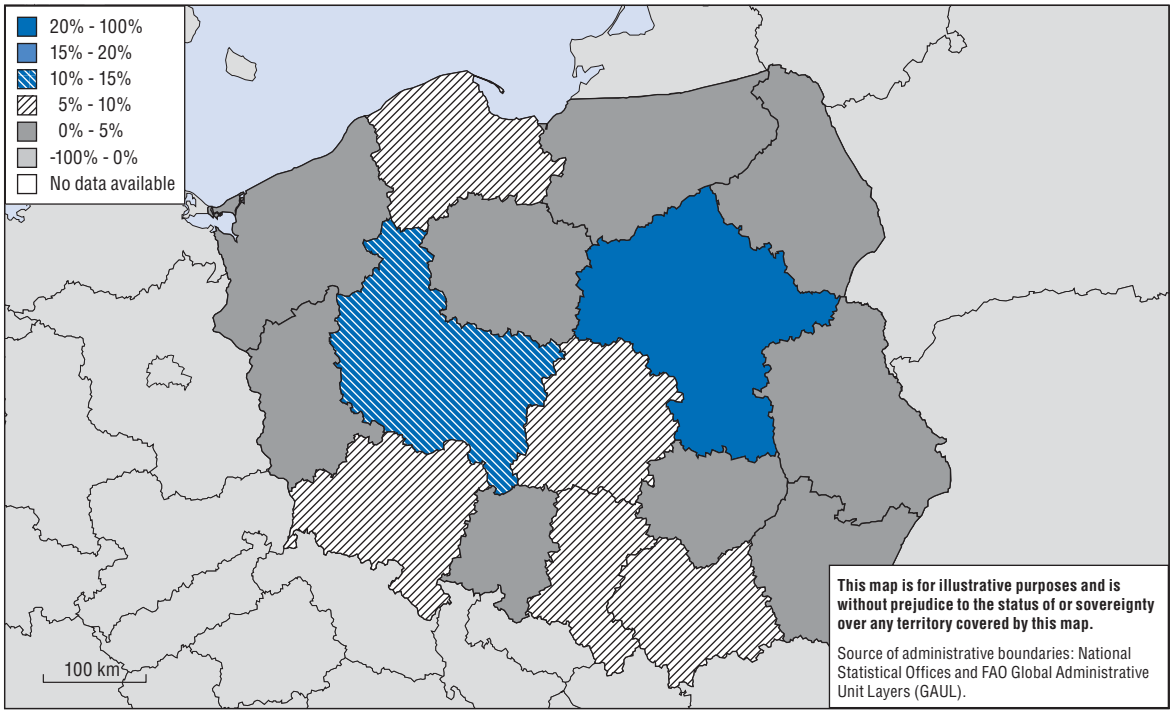
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

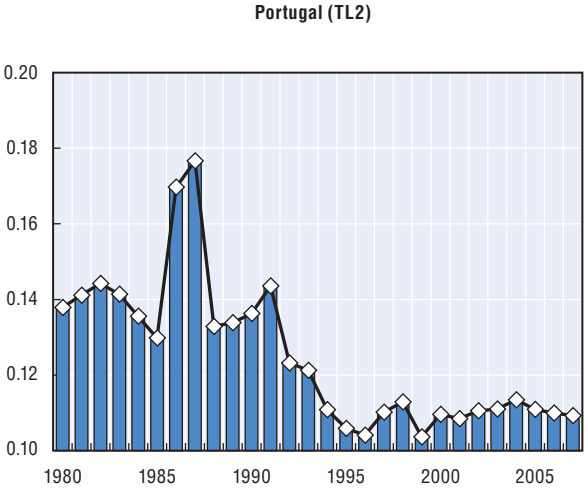
StatLink http://dx.doi.org/10.1787/888932521429

Portugal

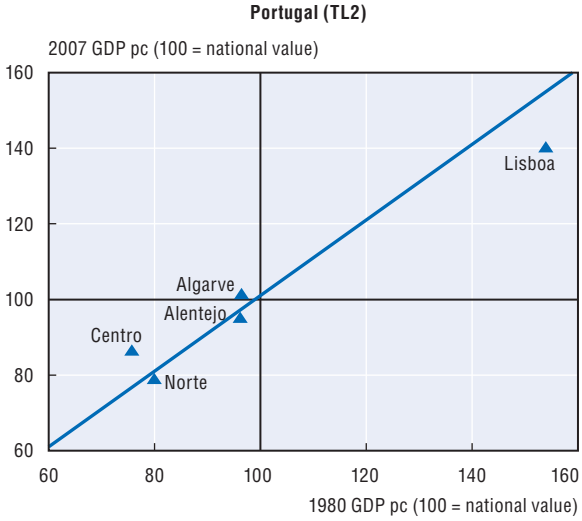
Population and territory	● 10.6 million inhabitants, 92 212 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system: ❖ TL2: 5 mainland regions + 2 autonomous regions (Açores and Madeira); the former TL2 mainland regions are administered by the *Comissões de Coordenação e Desenvolvimento Regional.* ❖ TL3: 30 *groups of municipalities*, among which 7 predominantly urban (52% of total population, +3.3 pp over the past 25 years), 8 intermediate regions (27%, +0.6 pp) and 15 predominantly rural regions (21%, –4 pp). ❖ 308 municipalities (*municípios*). ❖ 4 260 parishes (*freguesias*).
Share of sub-national government in total spending/revenues	● Spending: 14.8% (2009). ● Revenues: 16.8% (2009).
Concentration and inequalities	● Portugal has the eighth highest index of geographic concentration in GDP among OECD countries. Around 66% of Portugal's GDP is produced in only two of its seven TL2 regions (Lisboa and Norte). ● Inequality in GDP per capita between Portugal's TL2 (see graph note) regions decreased from 1980 to 2007. The largest increase in inequality occurred in the years 1985-87, reaching its highest value in 1987 and subsequently dropping back to its 1985 value. Except that spike inequality fluctuated between the Gini range 0.13 to 0.14. From the early 1990s, inequality declined and reached its lowest level in 1996 and in 1999. Since that year, inequality has remained constant. ● The drop in inequality in Portugal is driven by two forces, its leading regions falling behind and/or its lagging regions catching up. Over the past 27 years (see graph note), Lisboa's GDP per capita dropped from 54% above the national average in 1980 to 40% above the national average in 2007. During the past decade, Lisboa has maintained its leading position by growing at the same rate (1.51%) as the national average (1.49%) in its GDP per capita. ● The catching up process experienced by the lagging region Centro over the past 27 years (see graph note), reducing its GDP per capita gap from 24% below the national average in 1980 to 13% in 2007, has contributed to the reduction in inequality. Moreover, the catching up process of Região Autónoma da Madeira and Região Autónoma dos Açores, recording the fastest (4.1%) and the second fastest (3.0%) rate of growth in GDP per capita respectively, have also contributed to a decline in inequality.
Key challenges	● Regional disparities in terms of competitiveness. ● Declining low-density rural areas.
Objectives of regional policy	● Competitive, integrated and open economy. ● Equitable territory.
Legal/institutional framework for regional policy[1]	● National Spatial Policy Programme (NSPP, 2007). ● Regional spatial plans (PROT).
Urban policy framework	● POLIS XXI.
Rural policy framework[2]	–
Major regional policy tools	● New incentive schemes for R&D, innovation and SMEs. ● Projects of National Interest (PIN). ● National Council for Innovation and its Technological Plan. ● Competitiveness and Technology Hub initiative. ● New local finance law (General Municipal Fund, Municipal Cohesion Fund, and Municipal Social Fund).
Policy co-ordination at central level	● Co-ordination of the Ministry for Economy, Innovation and Development and the Ministry for Environment and Spatial Planning. ● Strategic advisory committees.
Multi-level governance between national and sub-national levels	● Regional spatial plans (PROT).
Policy co-ordination at regional level (cross-sectoral)	● Regional co-operation and development commissions (CCDRs). ● Inter-sectoral Co-ordination Council. ● Strategic advisory committees.
Policy co-ordination at regional level (geographic)	● Inter-municipal associations.
Evaluation and monitoring	● NSRF Observatory. ● Regional Dynamics Observation Centres at regional level.
Future orientations of regional policy	–

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

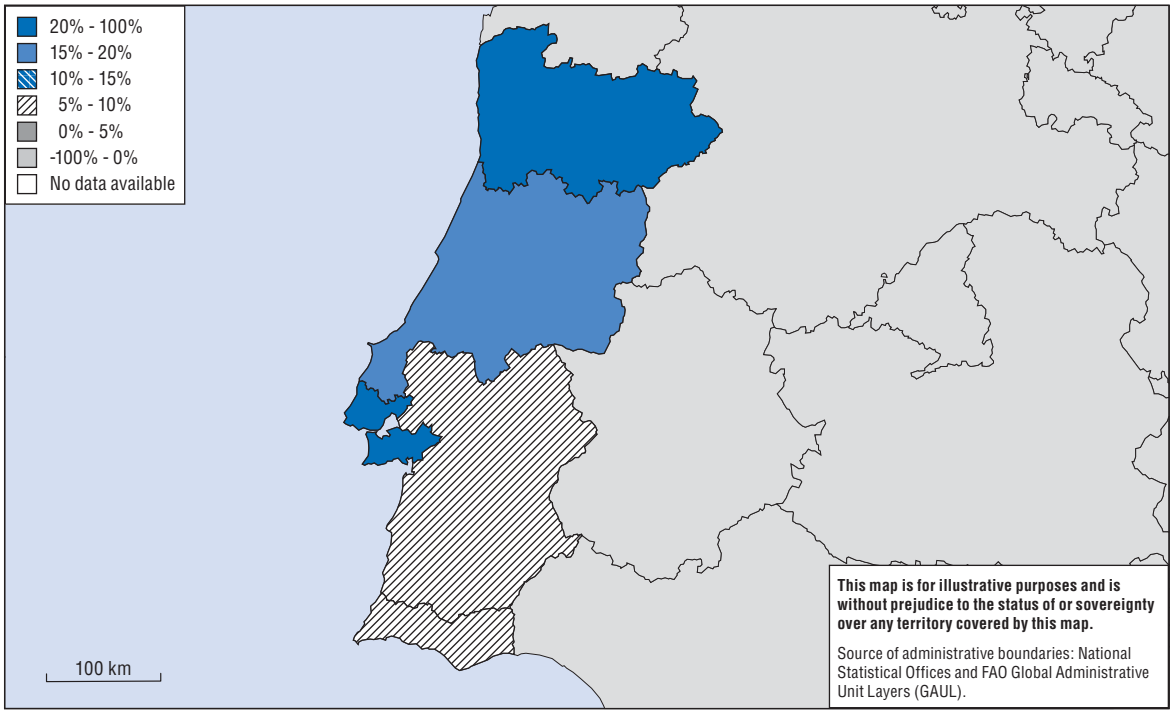
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Note: Data for 1980-2007 are missing for Região Autónoma da Madeira and Região Autónoma da Açores.

Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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Slovak Republic

Population and territory	● 5.4 million inhabitants, 49 033 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 4 *Oblasti*. ❖ TL3: 8 *Krajov*, among which one (Bratislavský kraj) predominantly urban region (11% of total population, –0.3 pp over the past 15 years), 5 intermediate regions (63%, +0.7 pp) and 2 predominantly rural regions (25%, –0.4 pp). ❖ 2 891 municipalities (obec), of which 138 municipalities have a city statute.
Share of sub-national government in total spending/revenues	● Spending: 17.4% (2009). ● Revenues: 11.9% (2009).
Concentration and inequalities	● The Slovak Republic's economy and population are the least concentrated among OECD countries. ● Inequality in GDP per capita among the Slovak Republic's TL2 regions has increased from 1990 to 2007. From the early 1990s to the mid-1990s, inequality increased at a stronger pace than it did from the mid-1990s to the 2007. ● The increase of inequality in the Slovak Republic is driven by its leading region Bratislav Kraj outperforming the rest of regions and by lagging regions Vychdne Slovensko and Stredne Slovensko falling further behind. ● Bratiskav Kraj has outperformed the national average, recording the fastest GDP per capita growth rate (5.5%) over the past decade among the Slovak Republic's TL2 regions, increasing the gap in GDP per capita from being 73% above the national average in 1990 to 138% above the national average in 2007. Although Bratiskav Kraj produces one fourth (24.6%) of the national GDP, due to its faster growth, it contributed a larger proportion to national GDP growth (32.6%) over the past decade. ● The lagging regions Vychdne Slovensko and Stredne Slovensko fell further behind in their respective GDP per capita levels by growing at a slower pace (3.6% and 3.5% respectively) than the national average (4.2%). Vychdne Slovensko's GDP per capita fell from 18% below the national average in 1990 to 27% below the average in 2007, and Stredne Slovensko's fell from 6% below the national average in 1990 to 20% in 2007. Despite their lower than average growth rate, their combined contribution to national overall GDP growth was 36.1 (19.3% for Vychdne Slovensko and 16.9% for Stredne Slovensko).
Key challenges	● West-east regional disparities, polarised economic growth. ● Social inclusion.
Objectives of regional policy	● Sustainable, place-based and balanced regional and sectoral development policy with three core objectives: ❖ Efficiency, based on innovation and competitiveness index. ❖ Equity, higher living standards, based on cohesion index. ❖ Environmental quality and high value of the Slovak countryside.
Legal/institutional framework for regional policy[1]	● Regional Development Support Act (2008). ● National Strategy for Regional Development 2010-2020/30 (2010), currently in the legislative process.
Urban policy framework	● KURS includes policies for urban development of the Slovak Republic.
Rural policy framework[2]	● KURS includes policies for rural development of the Slovak Republic.
Major regional policy tools	–
Policy co-ordination at central level	● Co-ordination role of the Ministry of Construction and Regional Development. ● Government Council for Regional Policy and Supervision on Structural Operations.
Multi-level governance between national and sub-national levels	● Regional development agencies. ● Spatial planning process, plans at all three levels of government from national to municipal level (duty according to the law to respect the guiding part of KURS in regional plans and to respect regional plans in city plans).
Policy co-ordination at regional level (cross-sectoral)	● Regional self-governance (eight higher territorial units).
Policy co-ordination at regional level (geographic)	● Duty regional planning (according to the law to respect the guiding part of KURS in regional plans and to respect regional plans in city plans).
Evaluation and monitoring	● Spatial planning authorities must evaluate spatial plans every four years.
Future orientations of regional policy	● Decentralisation reform, strategic planning, more focus on sustainability, green growth, place-based regional development policy, equity, efficiency, and a healthier environment of the countryside.

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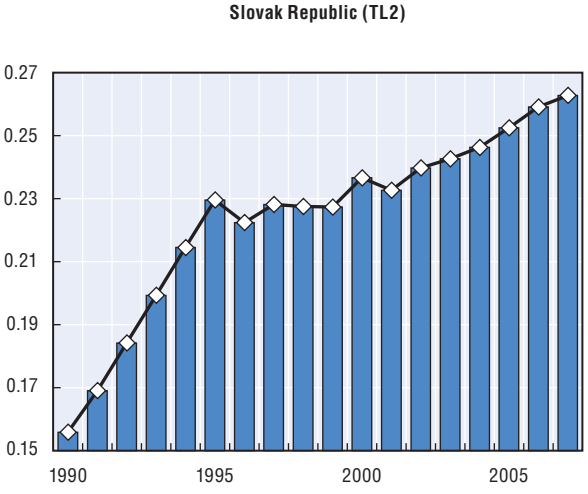
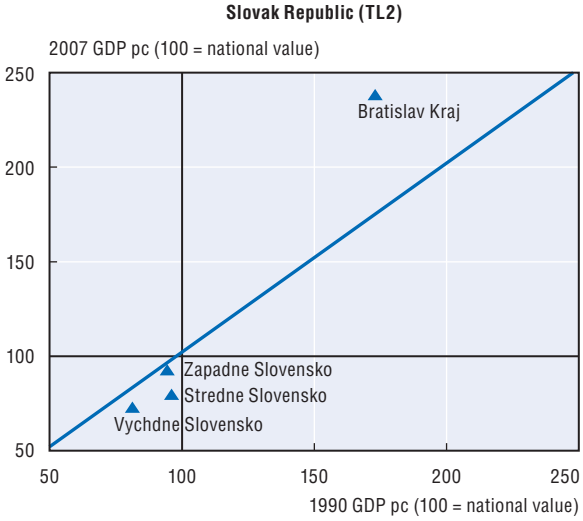
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

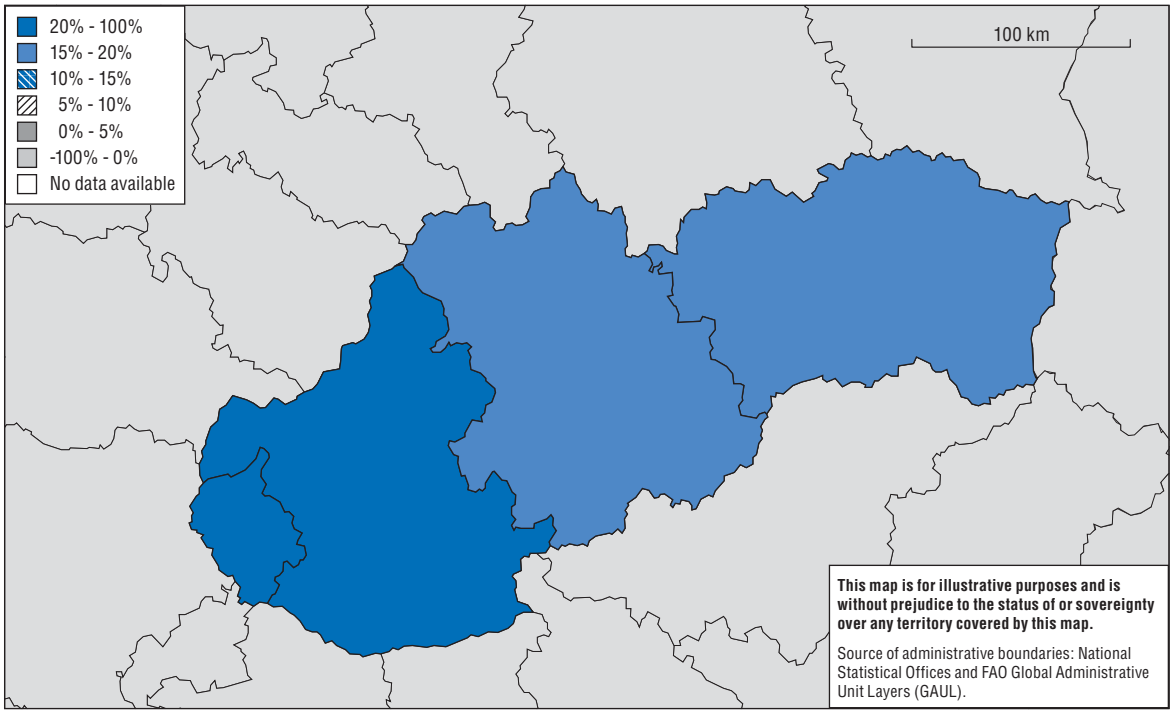
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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Slovenia

Population and territory	● 2 million inhabitants, 20 273 km^2.
Administrative structure	● Unitary country: ❖ TL2: 2 statistical regions (West Slovenia, East Slovenia). ❖ TL3: 12 unelected statistical regions.[3] ❖ 210 municipalities.
Share of sub-national government in total spending/revenues	● Spending: 19.4% (2009). ● Revenues: 11.3% (2009).
Concentration and inequalities	● Interregional inequalities among TL3 Slovenian regions widened during the period 1995-2007, which was typical of economies in transition; however, in comparison to OECD standards, inter-regional disparities remain low by OECD standards. ● Concentration of population and economic activity are relatively low in comparison to other OECD countries.
Key challenges	● Asymmetric impact of globalisation (*e.g.* recent crisis). ● Poor economic performance and depopulation of peripheral areas.
Objectives of regional policy	● Balanced regional development.
Legal/institutional framework for regional policy[1]	● Act on the Promotion of Balanced Regional Development (first introduced in 1999, revised in 2005, and revised in 2011).
Urban policy framework	● No single urban policy document. ● Regulations and national guidelines for local level within spatial planning and development.
Rural policy framework[2]	● Rural Development Plan 2007-13.
Major regional policy tools	● Three operational programmes: ❖ Operational Programme for Strengthening Regional Development Potentials (OP SRDP). ❖ Operational Programme for Human Resource Development (OP HRD). ❖ Operational Programme for the Development of Environmental and Transport Infrastructure (OP DETI). ● Regional development programmes.
Policy co-ordination at central level	● Government Office for Local Self-Government and Regional Policy: managing authority for Cohesion Policy. ● Government Office for Growth and European Affairs: co-ordination among central ministries; in charge of long-term development plans at the national level. ● Ministry of Finance: fiscal relations with sub-national governments.
Multi-level governance between national and sub-national levels	● Associations of municipalities.
Policy co-ordination at regional level (cross-sectoral)	● Regional development programmes.
Policy co-ordination at regional level (geographic)	● Regional development agencies. ● Council of Regions (mayors). ● Regional development councils.
Evaluation and monitoring	● Monitoring of regional programmes in the context of EU Cohesion Policy.
Future orientations of regional policy	● Give a contractual dimension to regional development programmes. ● Enhanced role given to Regional development councils.

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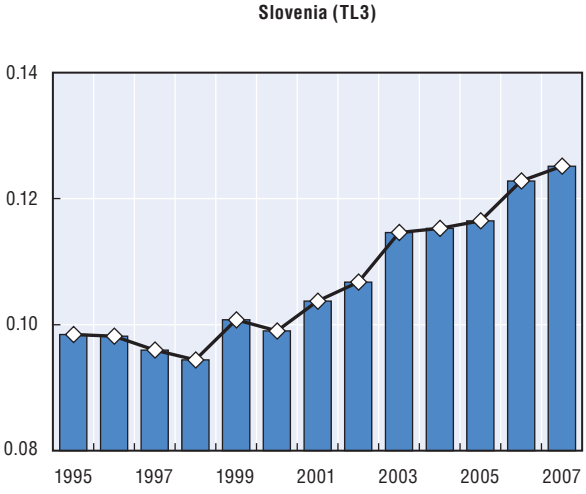
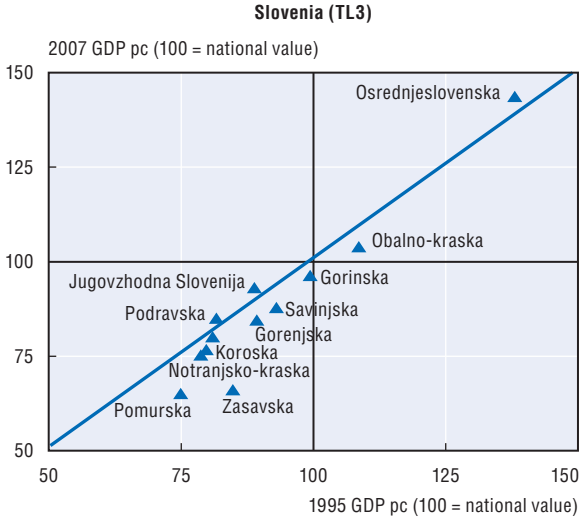
3. The OECD's current territorial database (covering 31 member countries excluding Slovenia) encompasses yearly time-series for around 40 indicators of demography, economic accounts, labour market, social and innovation themes at two sub-national administrative levels: that of large regions (TL2 = some 300 such regions) and small regions (TL3 = approximately 1 800 regions).

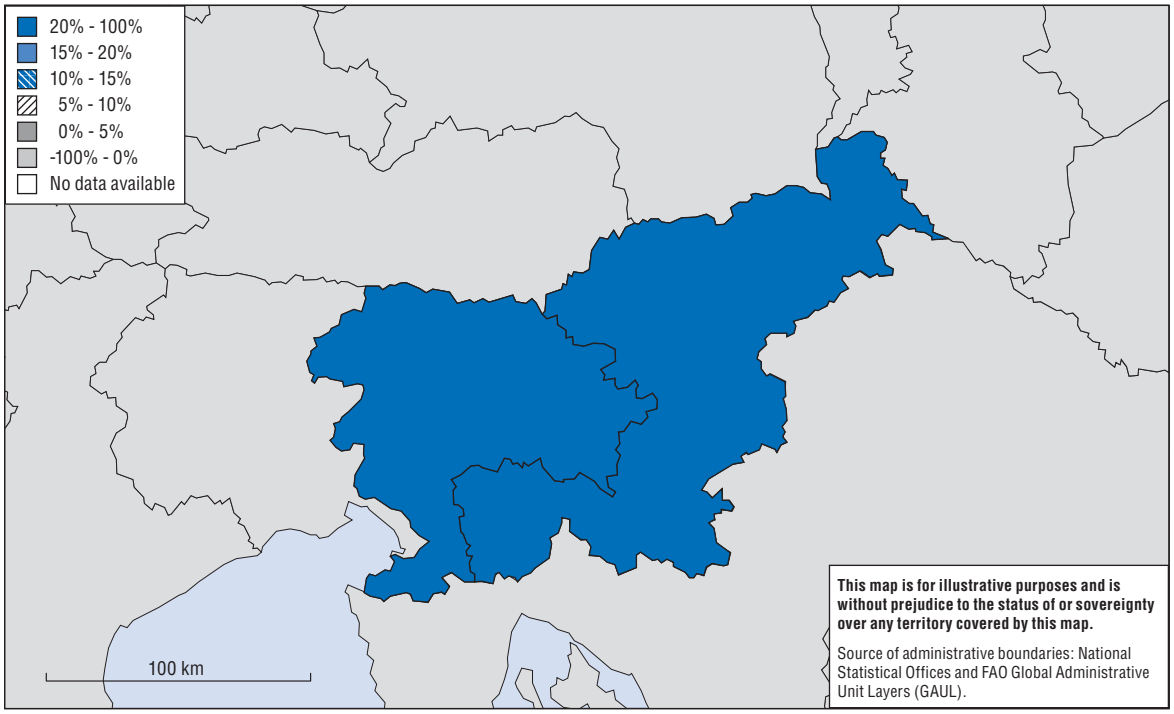
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on *OECD Regional Database* (2009).

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Spain

Population and territory	● 44.8 million inhabitants, 505 987 km^2.
Administrative structure	● Unitary country. ● Three-tiered sub-national system: ❖ TL2: 19 autonomous communities (*comunidades autónomas*). ❖ TL3: 50 *Provincias* + two autonomous cities of Ceuta and Melilla, among which 10 predominantly urban regions (45% of total population, +0.1 pp over the past 25 years), 25 intermediate regions (42%, +1.6 pp) and 17 predominantly rural regions (13%, –1.7 pp). ❖ 8 111 municipalities (*municipios*).
Share of sub-national government in total spending/revenues	● Spending: 49.2% (2009). ● Revenues: 35% (2009).
Concentration and inequalities	● Spain's economy is more concentrated than on average in OECD countries, with 10% of Spanish regions producing 44% of the national GDP as opposed to 38% in the OECD. Almost 60% of national GDP is produced in four TL2 regions: Cataluña (18.9%), Madrid (16.8%), Andalucia (13.5%) and Comunidad Valenciana (9.5%). ● Inequality in GDP per capita among Spain's TL2 regions declined from 1980 to 2007. After a strong reduction during the 1984-85 period, inequality remained constant from 1985 to 1999, and since 2000 it has been gradually declining. ● The decline in inequality has been driven by the catching up of Extremadura, Comunidad Autonoma of Ceuta and of Melilla, which recorded the third highest (2.8%), highest (3%) and tenth highest (2.2%) GDP per capita growth rates in Spain respectively during the past decade. Despite this catching up, Extremadura's GDP per capita remains 31% below national standards. ● The weak performance of Baleares and Rioja, both regions with higher GDP per capita levels than the national average and lower GDP per capita growth rates (1.2% and 1.5% respectively) during the past decade, has also reduced inequality. ● Although Madrid's annual average growth rate (2.1%) in GDP per capita during the past decade resembles the national average (2.2%) due to its large GDP size it contributed 20% of Spain's overall GDP growth over the past decade, followed by Cataluña (18.4%), Andalucia (15.1%) and Comunidad Valencia (10.4%).
Key challenges	● Regional disparities and the gap with the EU average.
Objectives of regional policy	● Fair and adequate level of economic equilibrium across regions (Constitution). ● Increase in the regions' competitiveness. ● Sustainable development.
Legal/institutional framework for regional policy[1]	● Economic development policy at regional level.
Urban policy framework	–
Rural policy framework[2]	● Law on Sustainable Development of Rural Areas (2007). ● Sustainable Rural Development Programme. ● Commission for Rural Development. ● Council for Rural Development.
Major regional policy tools	● Inter-Territorial Compensation Fund (FCI). ● Regional Investment Grant (RIG). ● National Reform Plan. ● Plan for Boosting Enterprise (2006).
Policy co-ordination at central level	–
Multi-level governance between national and sub-national levels	● Collaboration agreements (*convenios*). ● Sectoral co-operation conferences. ● Conference of Regional Presidents.
Policy co-ordination at regional level (cross-sectoral)	–
Policy co-ordination at regional level (geographic)	● Communities of municipalities.
Evaluation and monitoring	–
Future orientations of regional policy	● Decentralisation to increase autonomy of regions and municipalities.

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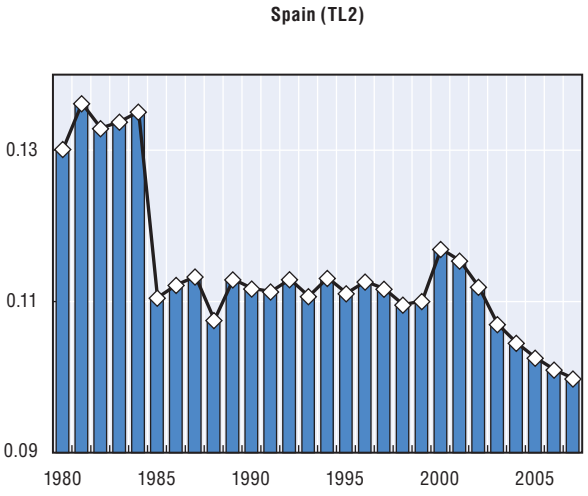
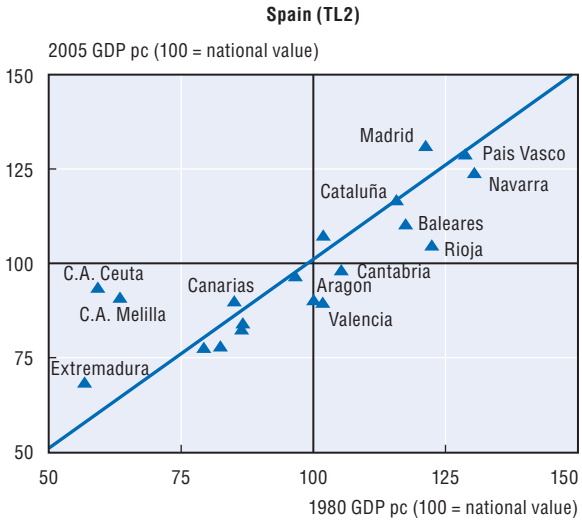
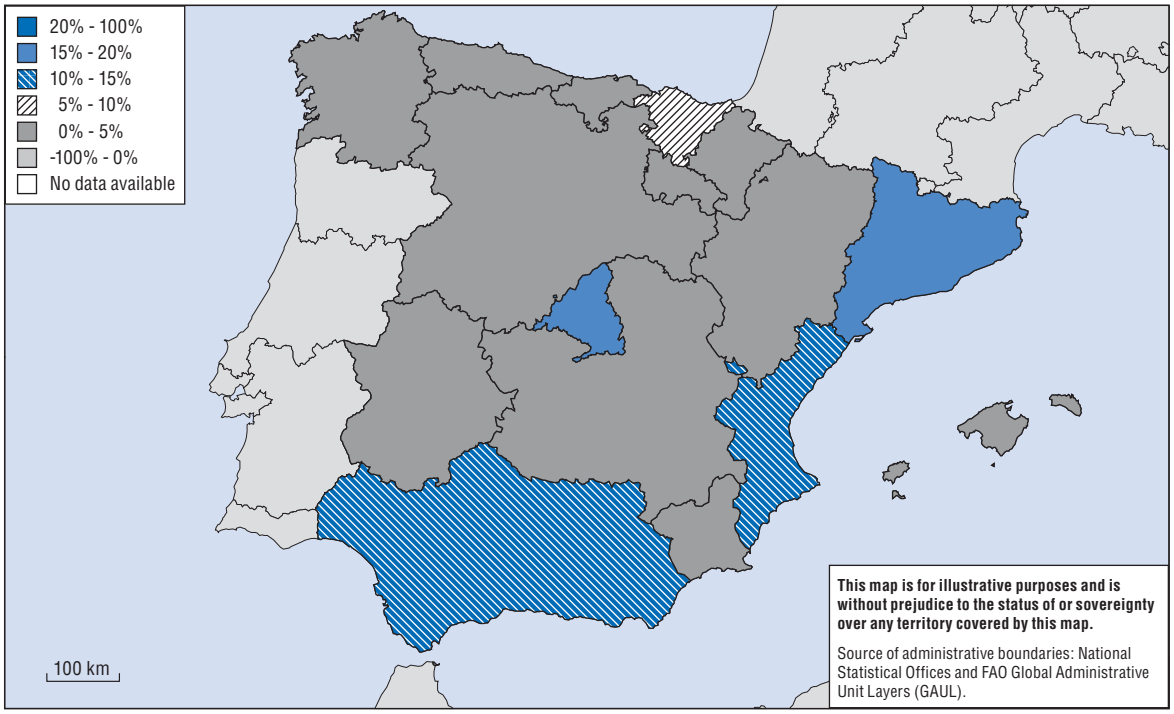
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

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Sweden

Population and territory	● 9.1 million inhabitants, 410 313 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 8 *Riksomraden*. ❖ TL3: 21 *Län*, among which only one predominantly urban region (Stockholm, 21% of total population, +1.8 pp over the last 15 years), 2 intermediate regions (30%, +0.6 pp) and 18 predominantly rural regions (49%, –2.4 pp). ❖ 290 municipalities (*kommuner*).
Share of sub-national government in total spending/revenues	● Spending: 46.9% (2009). ● Revenues: 38.6% (2009).
Concentration and inequalities	● Sweden's economy is the second most concentrated among OECD countries. Almost 60% (57%) of Sweden's GDP is produced in three out of 21 TL3 regions (Stockholm, Västra Götlands and Skåne). ● Inequality in GDP per capita among TL2 regions has been increasing steadily from 1980 to 2005. The increase in inequality has been significantly driven by Stockholm's buoyant growth rate in GDP per capita over the past ten years (3.6%), outperforming the national average (2.7%). Over a 27 years period, Stockholm's GDP per capita increased from 18% above the national standard to 36%. ● With the exception of Västraverige and Sydsverige, the remaining Swedish TL2 regions have also contributed to inequality by falling further behind the national average in GDP per capita over the period 1980 to 2007. ● Despite the increasing trend in inequality, it still remains fairly low relative to OECD standards. In 2007, Sweden displayed the lowest level of inequality in GDP per capita and in productivity (*i.e.* GDP per worker) among OECD TL3 regions. Östra Mellansverige and Småland med öarna, both TL2 regions with the lowest level of GDP per capita, trailed the national average by only 14% in 2007. ● Due to Stockholm's large size and vibrant economy it has contributed significantly (41.7%) to Sweden's overall GDP growth over the past decade, followed by Västsverige (19.6%), Sysverige (12.4%) and Östra Mellansverige (11.8%).
Key challenges	● Demographic change and how to maintain an equal level of local public services across the country. ● Urban-rural linkages and diversification of rural economy. ● Climate change issues.
Objectives of regional policy	● Dynamic development in all areas of the country with greater local and regional competitiveness.
Legal/institutional framework of regional policy[1]	● Regional development programmes (RUPs). ● Regional growth programmes (RTPs).
Urban policy framework	● National Programme for the Major Urban Areas 2006-09 (NUTEK/*Tillväxtverket*).
Rural policy framework[2]	● National Strategy for Rural Areas (2009).
Major regional policy tools	● VINN excellence centres (VINNVÄXT). ● NUTEK/*Tillväxtverket* regional cluster programme. ● Regional investment aid and transport grants. ● Fiscal equalisation system.
Policy co-ordination at central level	● Co-ordination of the Ministry of Enterprise, Energy and Communications. ● National Forum.
Multi-level governance between national and sub-national levels	● National Forum.
Policy co-ordination at regional level (cross-sectoral)	● Regional development programmes (RUPs). ● Regional growth programmes (RTPs). ● Co-ordination of Swedish Agency for Economic and Regional Growth (*Tillväxtverket*).
Policy co-ordination at regional level (geographic)	● Establishment of new regions through county associations. ● Municipal co-operation bodies.
Evaluation and monitoring	–
Future orientations of regional policy	● How to structure the central government regional administration (co-ordination of decentralisation and deconcentration). ● Creation of enlarged regions.

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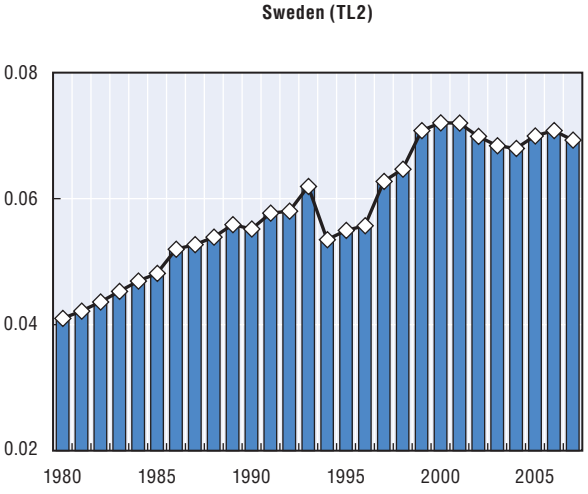
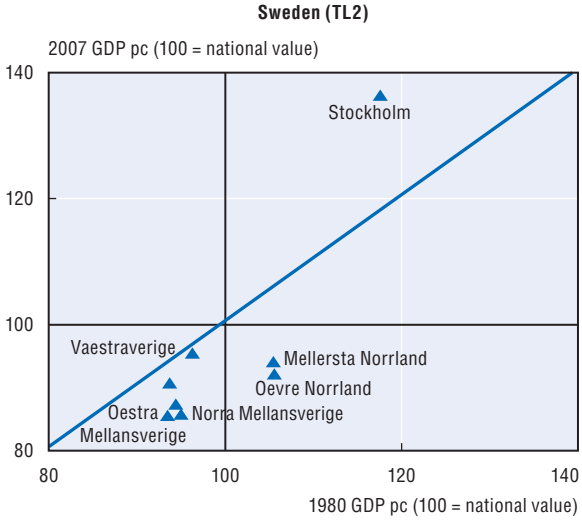
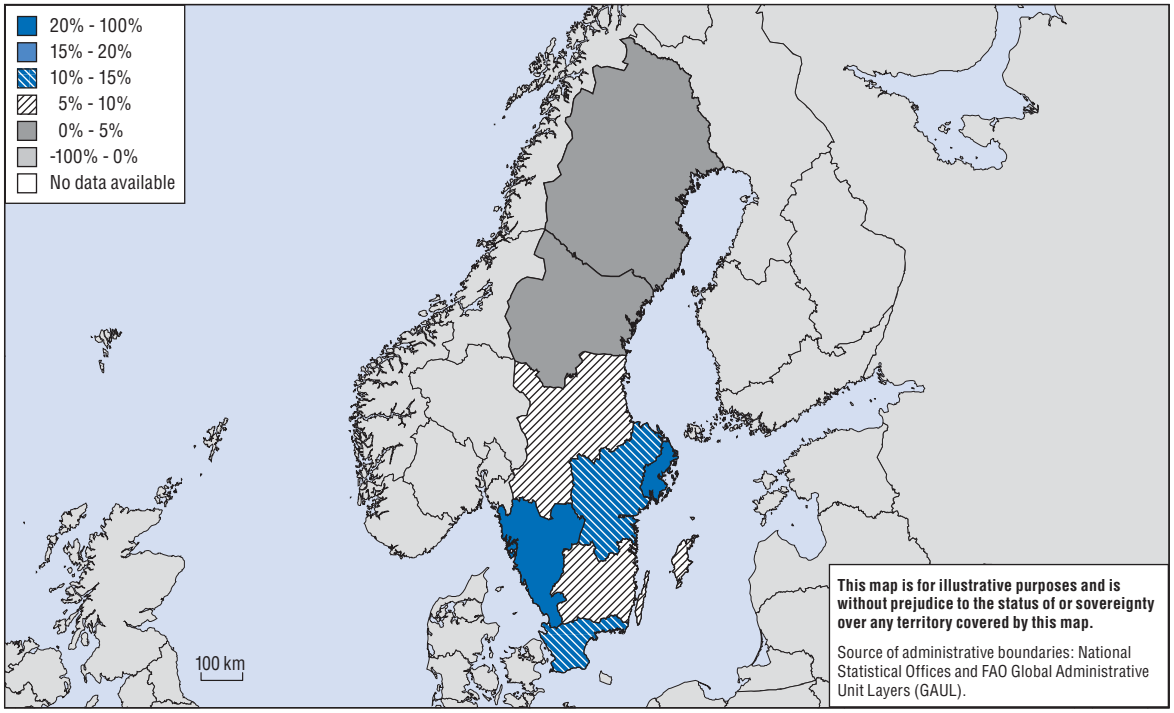
Gini index of inequality of GDP per capita across TL2 regions, 1990-2007



Regional performance in GDP per capita over time, 1990 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



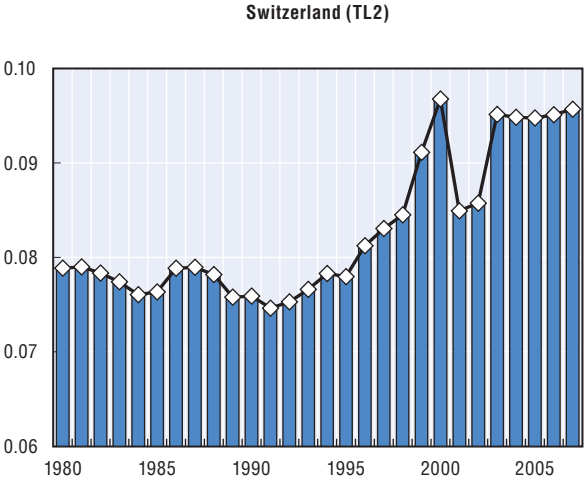
Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521524

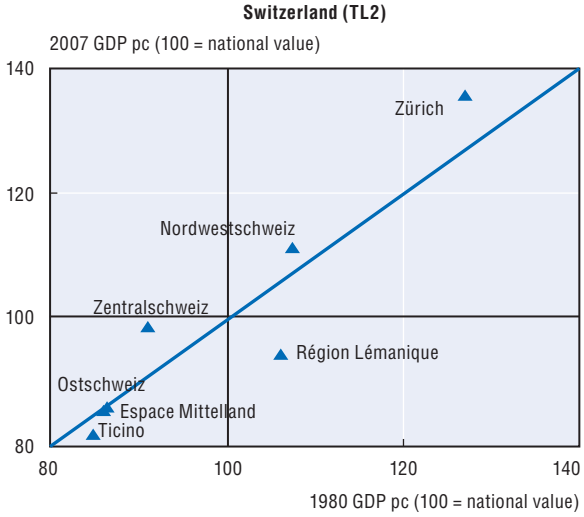
Switzerland

Population and territory	● 7.5 million inhabitants, 39 996 km^2.
Administrative structure	● Federal country. ● Two-tiered sub-national system: ❖ TL2: 7 *Grossregionen/Grandes regions/Grandi Regioni*. ❖ TL3: 26 *Kantone/Cantons*/Cantoni, among which 7 predominantly urban regions (41%), 12 intermediate regions (half of total population) and 7 predominantly rural regions (9%). ❖ 2 800 municipalities.
Share of sub-national government in total spending/revenues	● Spending: 56% (2009). ● Revenues: 45% (2009).
Concentration and inequalities	● Inequalities have increased over the period 1980-2007, and especially since the early 1990s. The increase in inequality has been driven by Zurich gaining further to the national average and two lagging regions Ticino and Espace Mittelland falling further behind. In addition, the Region Lemanique's decline has also contributed to the increase.
Key challenges	● Peripheral area challenges.
Objectives of regional policy	● Increase the competitiveness of the regions and value-added of the rural, mountainous and border regions.
Legal/institutional framework for regional policy	● Federal Law on Regional Policy (2006). ● Multi-year programme 2008-15. ● Canton level regional policy making: four-year implementation programme (2008-11). ● Four-year joint programme agreement (2008-11). ● Federal Law on Spatial Planning and ten-year cantonal spatial development plan.
Urban policy framework	● Federal Agglomeration Policy. ● Commission Tripartite.
Rural policy framework	● Agricultural Law of 1999.
Major regional policy tools	● Non-repayable grant and repayable loan. ● Financial equalisation system. ● Annual global fund. ● Federal-cantonal joint programme agreement.
Policy co-ordination at central level	● Conference of the Confederation for Territorial Organisation (COT). ● Federal Network for Rural Development. ● Working Party on Agglomeration Policy.
Multi-level governance between national and sub-national levels	● Joint programme agreement (co-financing, target setting and fiscal incentives). ● Networking agency *regiosuisse*.
Policy co-ordination at regional level (cross-sectoral)	● Differs from canton to canton. ● Cantonal spatial development plan.
Policy co-ordination at regional level (geographic)	● Differs from canton to canton. ● Inter-cantonal conference. ● Horizontal agreements (*concordats*). ● Specialised associations (*syndicats*). ● Regions (*e.g.* inter-municipal associations).
Evaluation and monitoring	● Federal government, cantons, *regiosuisse*. ● Monitoring related with programme agreement.
Future orientations of regional policy	–

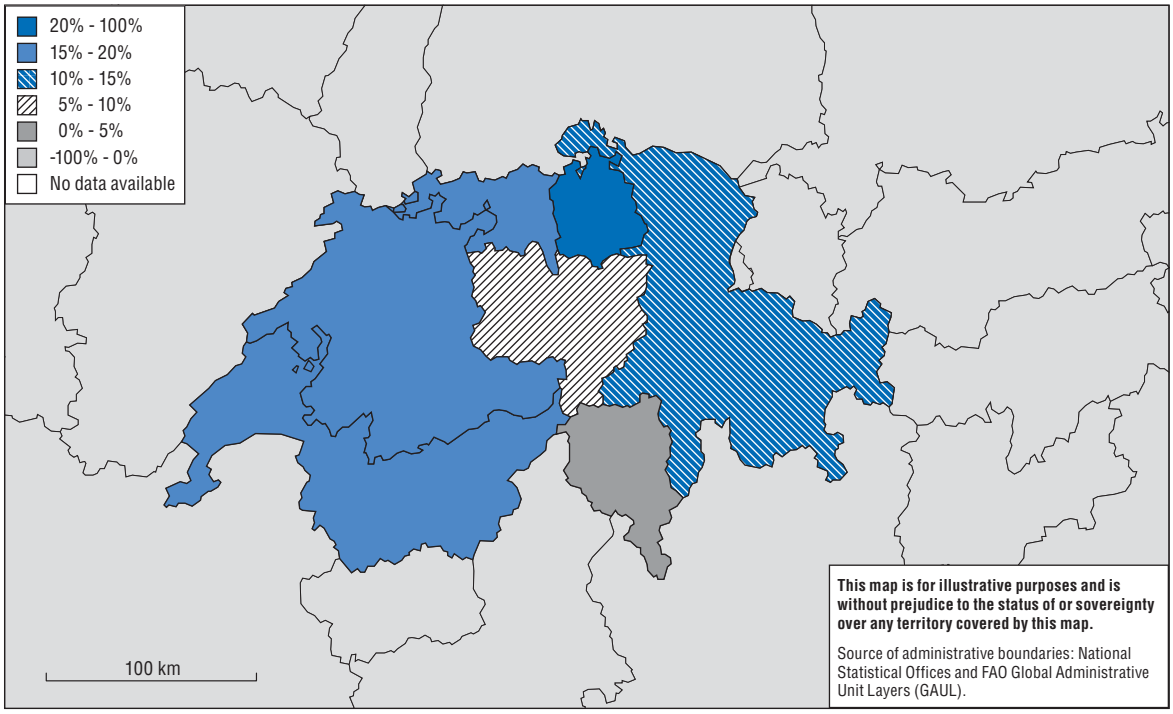
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2005



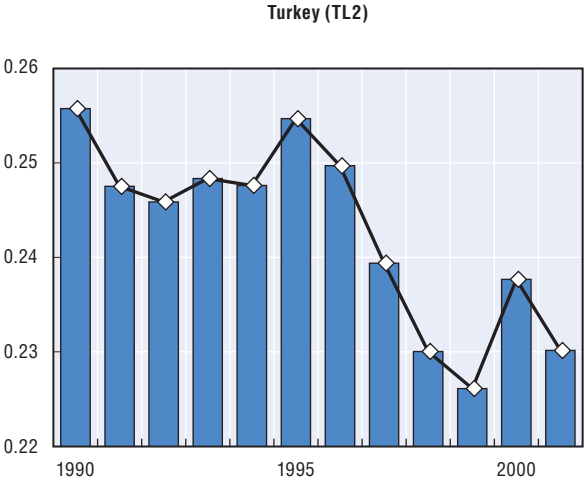
Note: GDP data are not official data, the data source is Cambridge Econometrics.

StatLink http://dx.doi.org/10.1787/888932521543

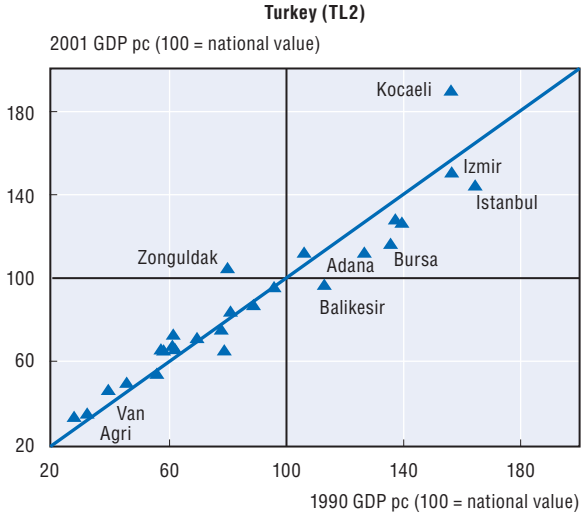
Turkey

Population and territory	● 70.6 million inhabitants, 769 604 km^2.
Administrative structure	● Unitary country. ● Two-tiered sub-national system: ❖ TL2: 26 *Regions*. ❖ TL3: 81 provinces (*Iller*), among which 13 predominantly urban regions (47% of total population, +8.1 pp over the past 17 years), 23 intermediate regions (25%, –3.1 pp) and 45 predominantly rural regions (27%, –5 pp) ❖ 3 225 municipalities, 34 304 villages, 923 districts.
Share of sub-national government in total spending/revenues	● Spending: data not available. ● Revenues: data not available.
Concentration and inequalities	● Turkey's economy is more concentrated than on average in OECD countries. 10% of Turkish TL3 regions produce 54% of the national output as opposed to 38% in OECD countries. ● Inequality in GDP per capita among Turkey's TL2 regions declined from 1990 to 2001. Although inequality fluctuated from the early 1990s to the mid-1990s, in 1995 it declined gradually to its lowest level in 1999. In 1999-2000 inequality increased again and from 2000-01 it declined. ● Although inequality declined over this period, Turkey's level of inequality (in GDP per capita among TL2 regions) is one of the highest among OECD countries. Kocaeli displays the highest level of GDP per capita, exceeding the national value by 90%, and Agri records the lowest, below 64% of the national value. ● The decline in inequality in Turkey from 1990-2001 is mainly driven by regions with higher levels of GDP per capita than the national average and lower growth rates such as Izmir (–0.03%), Istanbul (–1.04%), Balkesir (–1.64%), Bursa (–1.66%) and Adana (–1.78%). A second force contributing to a decline in inequality is the lagging regions growing faster than the national average. Only one region displayed a visible converging trend: Zonguldak, recording the fastest GDP per capita growth rate (5.6%) among Turkish TL2 regions. Consequently, its GDP per capita level, which used to be 20% lower than the national average in 1990, increased to 5% above the national average in 2001. ● The largest contribution to national growth was from Istanbul and Kocaeli, which contributed 23% and 12% of the overall GDP growth respectively over the period 1990-2001.
Key challenges	● Regional disparities across rural and urban areas and across regions. ● Disparities between Turkey and EU member countries.
Objectives of regional policy	● Make regional development policy effective at the central level. ● Ensure development based on local dynamics and internal potential and increase institutional capacity at the local level. ● Ensure development in rural areas.
Legal/institutional framework for regional policy	● Ninth Development Plan 2007-13. ● National Regional Development Strategy (2010).
Urban policy framework	–
Rural policy framework	● National Rural Development Strategy (2006).
Major regional policy tools	● Geographically differentiated incentive measures, Growth Centres Development Programmes. ● Village Infrastructure Support Programme (VISP). ● Rural Development Investment Support Programme (RDISP). ● Regional development projects (*e.g.* Eastern Black Sea Project).
Policy co-ordination at central level	● Co-ordination of State Planning Organisation. ● Inter-ministerial committee.
Multi-level governance between national and sub-national levels	–
Policy co-ordination at regional level (cross-sectoral)	● Governorships. ● Development agencies.
Policy co-ordination at regional level (geographic)	● Governorships. ● Development agencies.
Evaluation and monitoring	● Provincial Co-ordination and Monitoring System (İKİS). ● Development Agencies Management System (KAYS).
Future orientations of regional policy	–

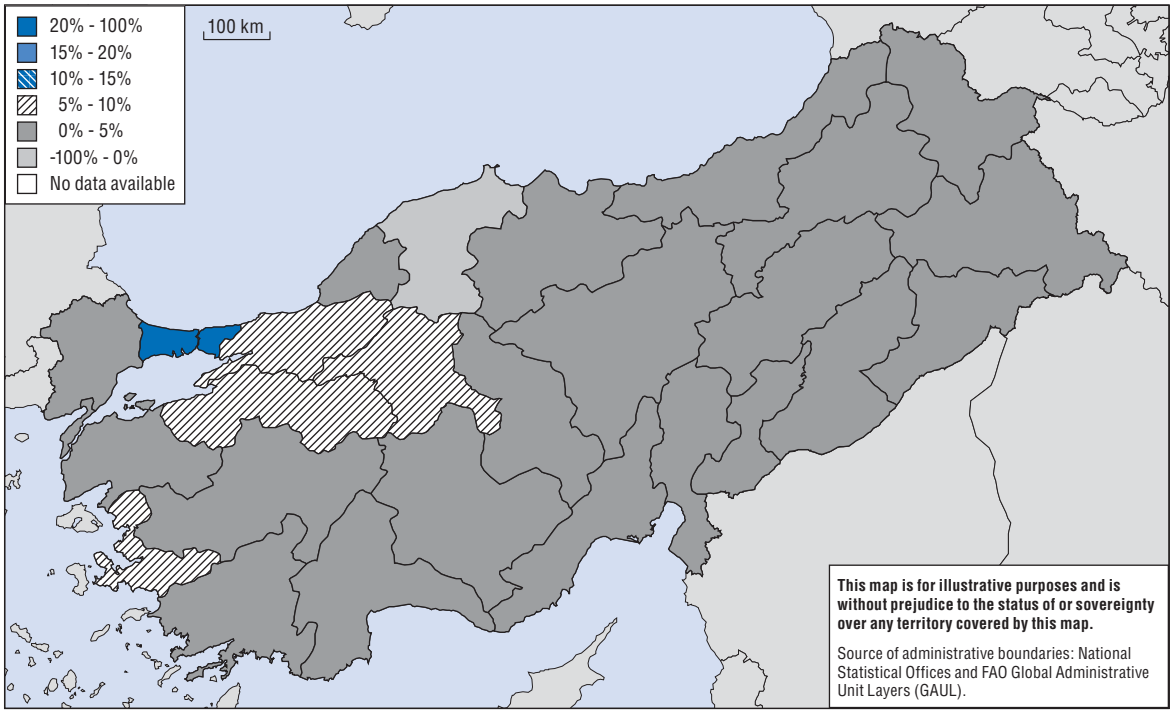
Gini index of inequality of GDP per capita across TL2 regions, 1990-2001



Regional performance in GDP per capita over time, 1990 and 2001



Regional contribution (%) to national GDP growth, 2004-06



Source: Calculations based on *OECD Regional Database* (2009).

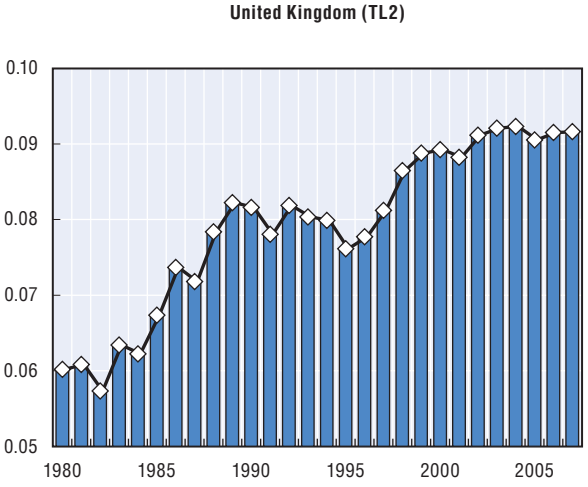
StatLink http://dx.doi.org/10.1787/888932521562

United Kingdom

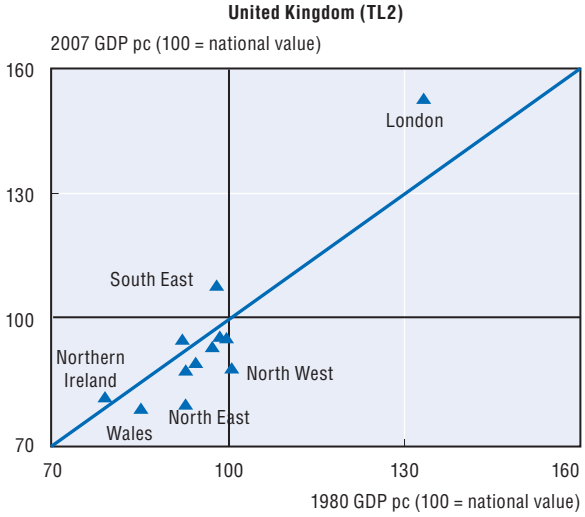
Population and territory	• 61 million inhabitants, 243 069 km^2.
Administrative structure	• Unitary country, comprising 4 constituent countries: England, Scotland, Wales and Northern Ireland. • The territorial organisation of the UK differs widely among the constituent countries. England has the Greater London Authority at the regional level, 36 metropolitan authorities, 47 unitary authorities, 34 county councils and 238 district councils as well as parish councils at the local level. Scotland has 32 unitary authorities at the intermediate level. Wales has 22 unitary authorities at the intermediate level and community councils at the local level. Northern Ireland has 26 district councils at the local level. • Sub-national system: ❖ TL2: 12 *Government Office Regions + Countries*. ❖ TL3: 133 *Upper tier authorities or groups of lower tier authorities (unitary authorities or districts*), among which 82 predominantly urban regions (40% of total population, –0.7 pp over the past 12 years), 40 intermediate regions (49%, +0.7 pp) and 11 predominantly rural regions (11%, constant).
Share of sub-national government in total spending/revenues	• Spending: 27.5% (2009). • Revenues: 10.6% (2009).
Concentration and inequalities	• The United Kingdom displays the third highest concentration of economic activity (among TL3 regions) in the OECD according to the index of geographic concentration. The TL2 region of London alone produced almost one fifth of the United Kingdom's GDP. • Inequality in GDP per capita among TL2 regions has been steadily increasing since the early 1980s. The increase has been driven by London's buoyant growth in GDP per capita (3.2%), outperforming the national average (2.6%) during the past decade. The gap in London's GDP per capita relative to the national average increased from being 33% above the national value in 1980 to 53% in 2007. Consequently, London's contribution to national GDP growth over the past decade was significant (25%). Following London, South East recorded the second highest growth rate (3.1%) in GDP per capita over the past decade and contributed almost one fifth (17.9%) of the national GDP growth. • The further decline of lagging regions over the period 1980-2007 contributed to inequality; in particular, the low growth rate in GDP per capita displayed by the lagging regions Wales (1.9%), North East (2.2%) and North West (2.2%). • Despite the lower growth rate of lagging regions, their combined contribution to national growth remains quite significant, almost 60% (57.4%) during the past decade.
Key challenges	• On-going inter-regional and intra-regional disparities. • Urban deprivation.
Objectives of regional policy	• Target the key drivers of productivity in all regions. • Enhance commitment to devolved/decentralised arrangements for policy delivery.
Urban policy framework	• No single legislation.
Rural policy framework[2]	• Rural White Paper (2000) and rural-proofing. • Rural Strategy (2004), including Rural Pathfinders. • Law of Natural Environment and Rural Communities (2006).
Major regional policy tools	• Regional Selective Assistance (Scotland and Wales). • Selective Finance for Investment (England). • Funding for the RDA (England).
Policy co-ordination at central level	• Regional Economic Performance Public Service Agreement (REP PSA).
Multi-level governance between national and sub-national levels	• Regional Economic Performance Public Service Agreement (REP PSA). • Integrated regional strategies (England). • Regional development agencies (RDAs) (England). • Regional minister (England). • Government Offices and the Regional Emphasis Document (England).
Policy co-ordination at regional level (cross-sectoral)	• Regional development agencies (England). • Integrated regional strategies (England).
Policy co-ordination at regional level (geographic)	• Regional development agencies (England). • Integrated regional strategies (England). • National Planning Framework of Scotland. • Wales Spatial Plan. • Local and multi-area agreements. • Urban or city-region strategies. • Economic Prosperity Board.
Evaluation and monitoring	• Spatial Economic Research Centre. • Regional Observatories.
Future orientations of regional policy	• Balance between regional and city-region/sub-regional and local approaches. • New Conservative-Liberal Democrat Coalition government has announced plans to dismantle regional planning structures and RDAs in England and replace them with local enterprise partnerships.

1. In all EU member countries, the National Strategic Reference Framework (NSRF) required by Cohesion Policy is also part of the legal/institutional framework.
2. In all EU member countries, the National Strategic Plan (NSP) (and the regional Rural Development Plans [RDPs] in federalised and strongly regionalised countries) is a basic rural policy document required by EU Rural Development Programmes. Each member country has the choice of either submitting a single NSP for its entire territory or of breaking down its territory into regions and submitting a set of regional RDPs.

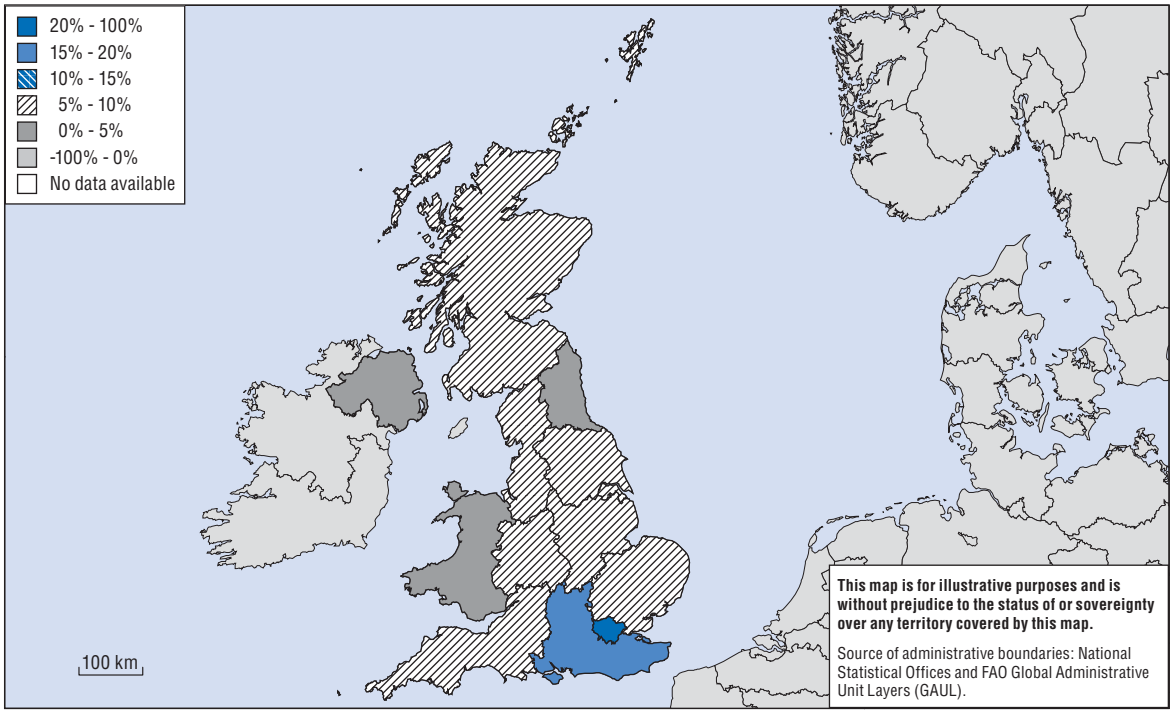
Gini index of inequality of GDP per capita across TL2 regions, 1980-2007



Regional performance in GDP per capita over time, 1980 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



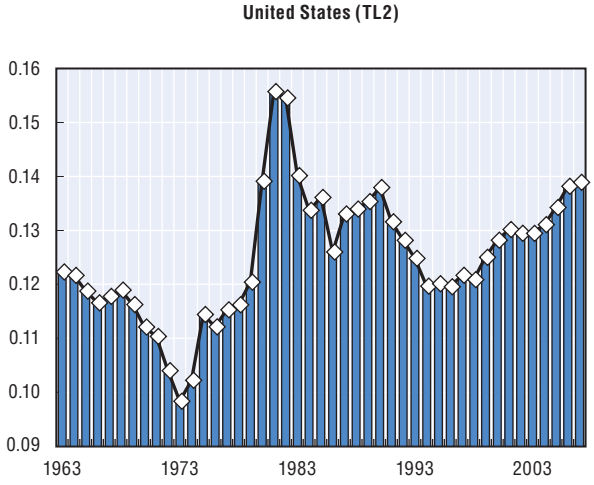
Source: Calculations based on Cambridge Econometrics and *OECD Regional Database* (2009).

StatLink http://dx.doi.org/10.1787/888932521581

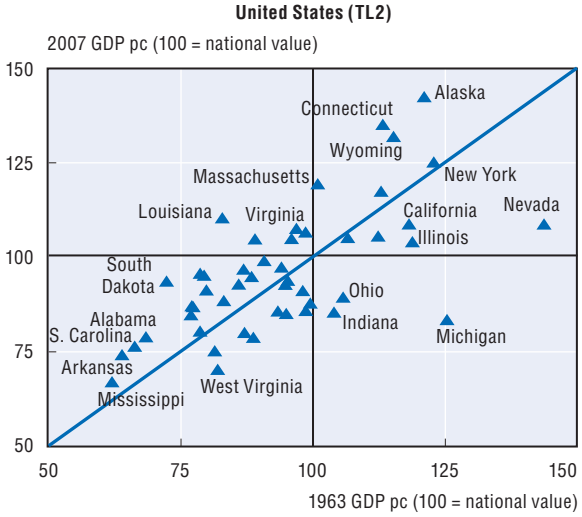
United States

Population and territory	● 301.6 million inhabitants, 9.2 million km^2.
Administrative structure	● Federal country. ● Two-tiered sub-national system: ❖ TL2: 51 *States*. ❖ TL3: 179 *(BEA) Economic Areas*, among which 26 predominantly urban regions (43% of total population, +0.3 pp over the past 25 years), 21 intermediate regions (20%, +0.2 pp) and 132 predominantly rural regions (37%, –0.5 pp). ❖ Approximately 20 000 municipalities (local government structure differs between States).
Share of sub-national government in total spending/revenues	● Spending: 48.8% (2009). ● Revenues: 45.9% (2009).
Concentration and inequalities	● Economic activity in the United States (among TL2 regions) is more concentrated than in OECD countries, with 39% of national GDP being produced by 10% of regions as opposed to 38% in OECD countries. Almost 30% of national GDP is produced by California (12.6%), New York (8.2%), and Texas (7%) combined. ● Inequality in GDP per capita among TL2 regions in the United States has fluctuated during the past 50 years. From 1963 to 1973 inequality declined to its lowest level in 1973; thereafter, inequality increased to its highest level in 1981. During these past 25 years, inequality first declined from 1981 to 1997, and since 1997 it has been gradually increasing. ● Alaska, Connecticut, Wyoming and Massachusetts improved their above average levels of GDP per capita in 1963 over the past 50 years, contributing to an increase in inequality. Likewise, the lagging region West Virginia also contributed to inequality by falling further behind. ● In contrast, the catching-up of the lagging regions Mississippi, Arkansas, South Carolina, Alabama, South Dakota, Louisiana and Virginia has contributed to a decline in inequality, as well as the falling behind of regions with above average GDP per capita levels in 1963 such as Nevada, Michigan, Indiana, Ohio and Illinois. ● Over the past ten years, the main drivers of national growth have been California, Texas, Florida, New York and Virginia, contributing 14.9%, 10.3%, 7.3% and 6.5% of the overall GDP growth respectively. The combined contribution to national growth by lagging TL2 regions (*e.g.* with below average GDP per capita levels in 2007) was quite significant (50%) over the past decade.
Key challenges	● Distressed communities and regions.
Objectives of regional policy	● Federal policies typically provide infrastructure or plan investment to distressed areas to generate employment or provide affordable housing options. ● Regional competitiveness, clusters, innovation, and sustainable development is an approach for some newer programmes.
Legal/institutional framework for regional policy	● No overarching framework, separate laws for different federal programmes. ● State-level regional policy making.
Urban policy framework	● No overarching framework, main entity responsible for policy is the Department of Housing and Urban Development
Rural policy framework	● No overarching framework, main entity responsible for policy is the Department of Agriculture.
Major regional policy tools	● Grants for infrastructure and planning are the main policy tool. ● A few programmes seek to support regional economic development strategies, clusters and workforce development.
Policy co-ordination at central level	● Limited but increasing co-ordination process at the federal level for regional development policy (*e.g.* co-ordination of seven federal agencies on energy-building systems related to regional innovation clusters).
Multi-level governance between national and sub-national levels	● Different federal departments and agencies may work with the state government or have their own regional representative offices, each with a different catchment area.
Policy co-ordination at regional level (cross-sectoral)	● State governments may have inter-departmental committees for specific themes.
Policy co-ordination at regional level (geographic)	● Special district governments. ● Economic Development Administration.
Evaluation and monitoring	● Performed at programme level by each administering department or agency.
Future orientations of regional policy	● Increasing focus on regional competitiveness, innovation, clusters and sustainable development in several federal programmes.

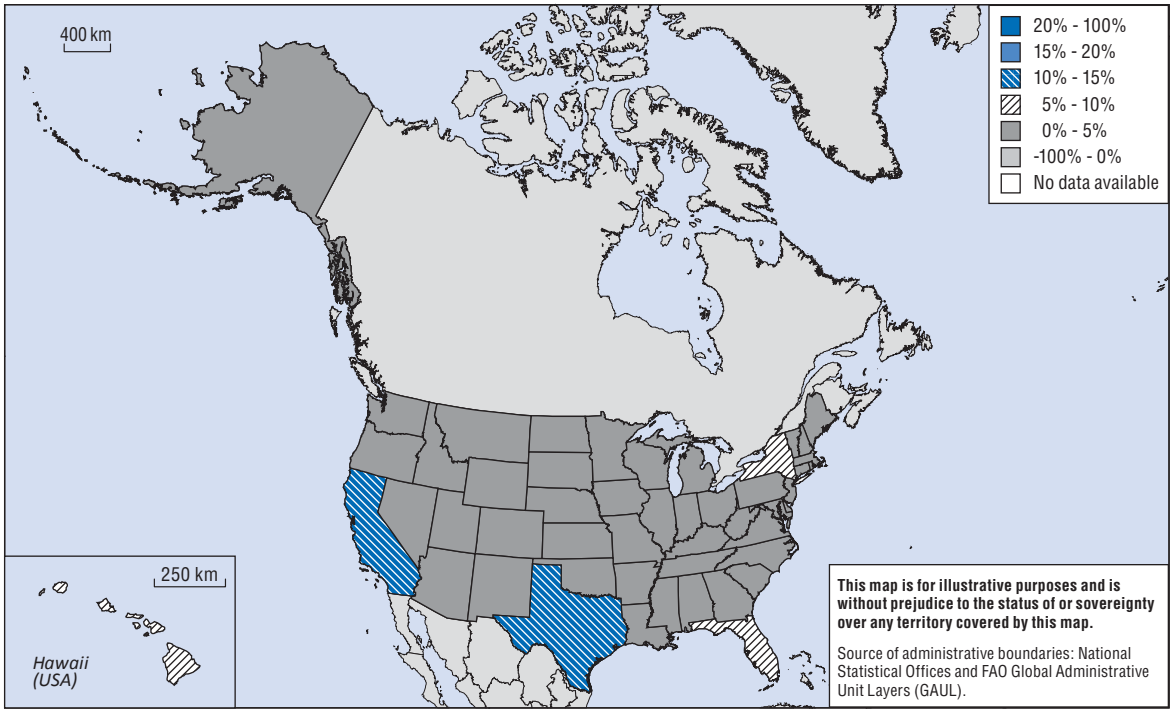
Gini index of inequality of GDP per capita across TL2 regions, 1963-2007



Regional performance in GDP per capita over time, 1963 and 2007



Regional contribution (%) to national GDP growth, 1995-2007



Source: Calculations based on data from the US Bureau of Economic Analysis and *OECD Regional Database* (2009).

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