

### 3. GEOGRAPHIC CONCENTRATION OF GDP

Gross domestic product (GDP) is unevenly distributed among regions within countries. In 2003, 38% of total OECD GDP was generated by only 10% of regions (Figure 3.1).

#### Economic output is highly concentrated

In 2003, GDP was particularly concentrated in Turkey and Portugal, where 10% of regions accounted for more than half of national GDP. In Sweden, Canada, Hungary, Spain, Austria, Finland, Greece, Mexico and Japan, the top 10% of regions were responsible for no less than 40% of national GDP. The territorial distribution of GDP was more balanced in the Slovak Republic, Belgium and Denmark, where the 10% of regions with the highest output contributed no more than one-quarter of the national total.

The geographic concentration index (Figure 3.2) compares the geographic distribution of GDP, and the area of all regions, not just the top 10%. According to this index, in 2003 Portugal (56), Sweden (55) and the United Kingdom (54) displayed the highest concentrations of GDP, followed closely by Korea (51), Australia and Finland (50). GDP was more evenly distributed in the Slovak Republic (24), the Czech Republic (27), the Netherlands (29), Belgium (33), and Denmark (35).

During 1998-2003, concentration increased most in Hungary (3), and Poland (2) and decreased most in the Czech Republic (-2), and Portugal (-1).

Predominantly urban regions appear to attract the largest share of economic activity (Figure 3.3).

In 2003, 53% of total GDP in the OECD area was produced in urban regions, which accounted for the largest share of national GDP in Belgium (88%), the Netherlands (87%), the United Kingdom (74%), Japan and Italy, (59%), Portugal (58%) and Germany (55%).

#### Rural areas generate the least income

Intermediate regions account for a smaller share, but still contribute 31% to overall GDP. In the Czech Republic (72%), the Slovak Republic (53%), Turkey, and Spain (47%), intermediate regions were responsible for no less than 47% of national GDP. For their part, predominantly rural regions accounted for only 15% of GDP. However, they contributed notably to national GDP in Ireland (62%), Finland (53%) and Sweden (43%).

#### Output is more concentrated than population

A comparison of the indices of geographic concentration for GDP and population shows that, in almost all countries, GDP is more concentrated than population (Figure 3.3). Only in Korea does the concentration of population exceed that of GDP.

These results provide evidence of significant “economies of agglomeration”, i.e. that GDP per capita tends to be higher in regions where population is highly concentrated. This pattern is clearest in countries where large urban regions or capital cities (Attiki, Uusimaa, Dublin, Budapest, Grande Lisboa) have become the motors of their national economies.

#### Definition

GDP is the final result of the production activity of resident producer units. It is expressed at constant prices (2000) for comparisons over time, and in Purchasing Power Parity (PPP) for comparisons across countries.

### 3. GEOGRAPHIC CONCENTRATION OF GDP

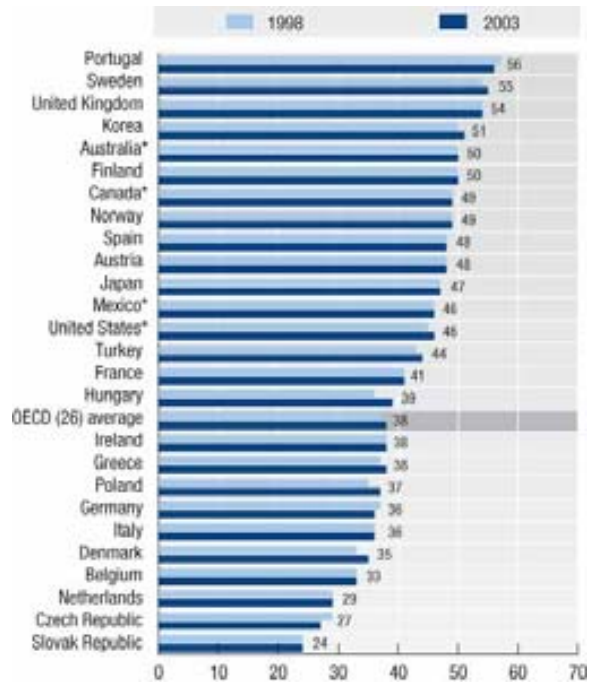
#### 3.1. In 11 countries more than 40% of national GDP is concentrated in 10% of regions

Per cent of national GDP in the top 10% of the regions when ranked by the GDP of regions (TL3)



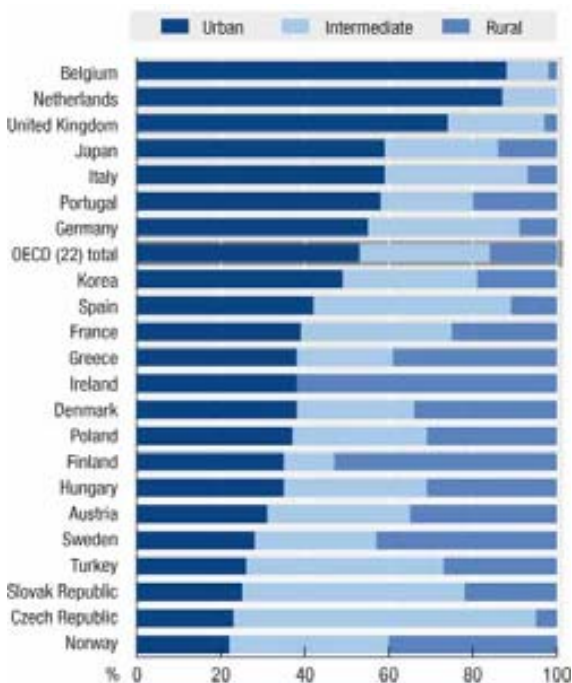
#### 3.2. In 2003, Portugal, Sweden and the United Kingdom displayed the highest geographic concentration of GDP

Index of geographic concentration of GDP (TL3)



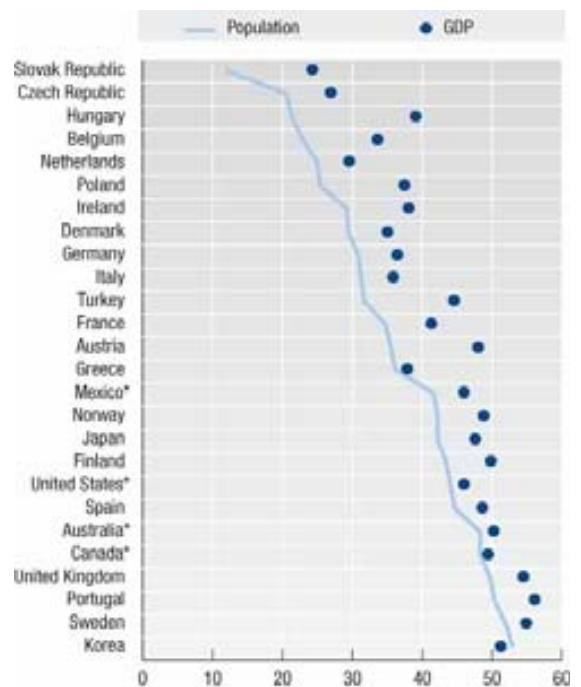
#### 3.3. In 2003 more than half of OECD-area GDP was produced in predominantly urban regions

Distribution of the national GDP into predominantly urban, intermediate and rural regions, 2003 (TL3)



#### 3.4. The spatial distribution of GDP does not reflect the geographic distribution of the population

Concentration index, 2003 (TL3)

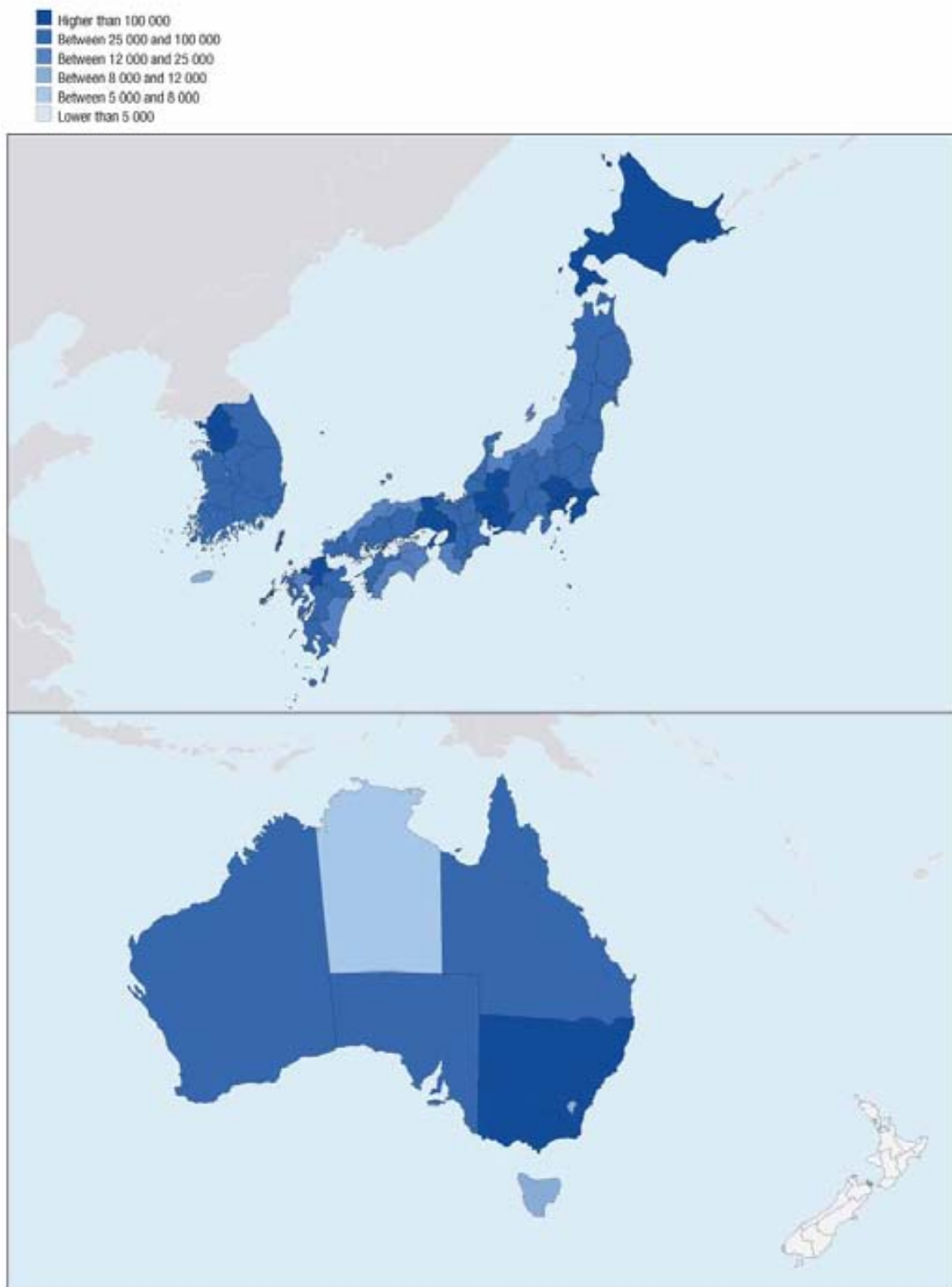



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### 3. GEOGRAPHIC CONCENTRATION OF GDP

#### 3.5. Regional GDP: Asia and Oceania

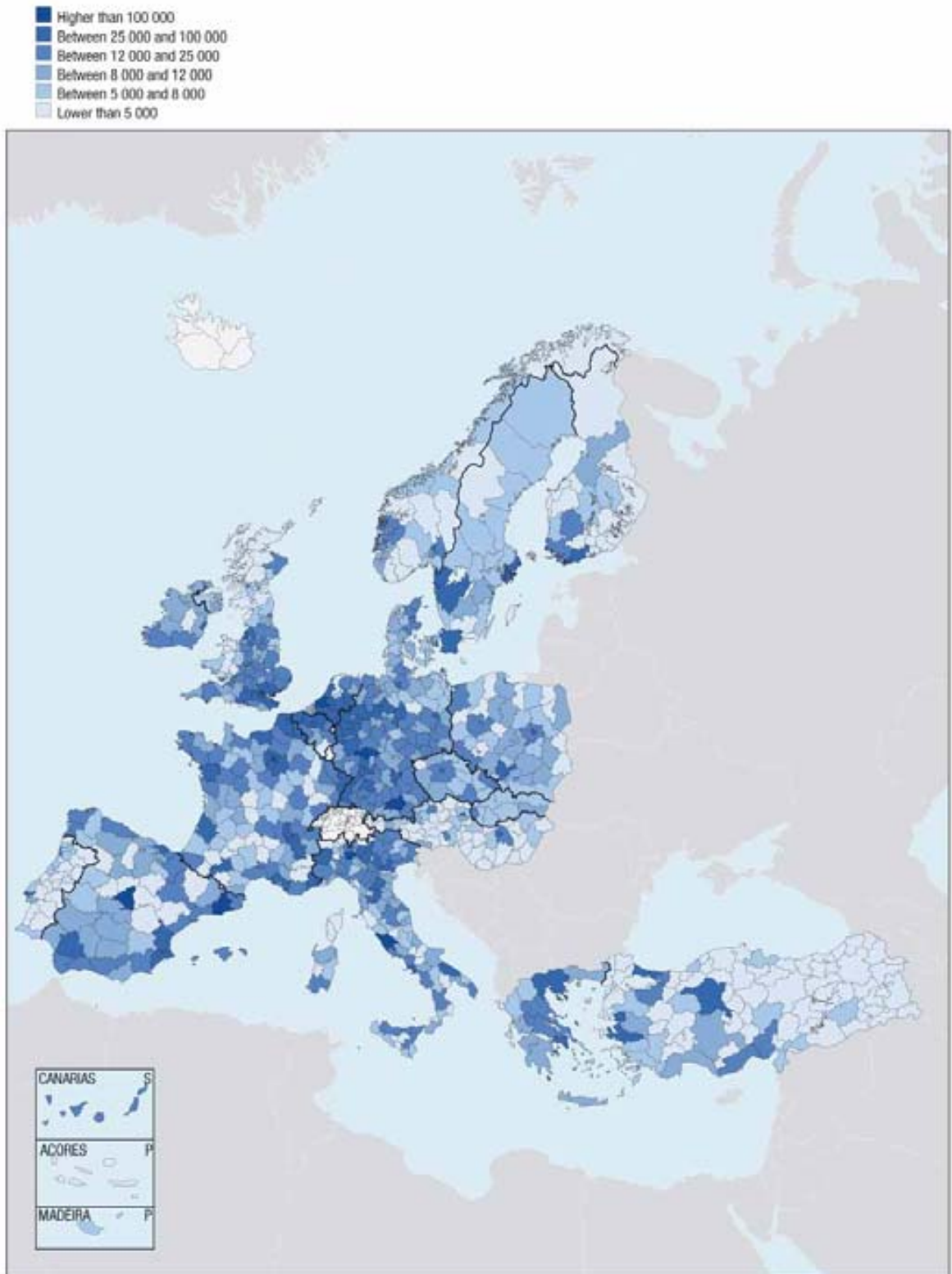
Millions of constant 2000 USD PPP, 2003



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#### 3.6. Regional GDP: Europe

Millions of constant 2000 USD PPP, 2003



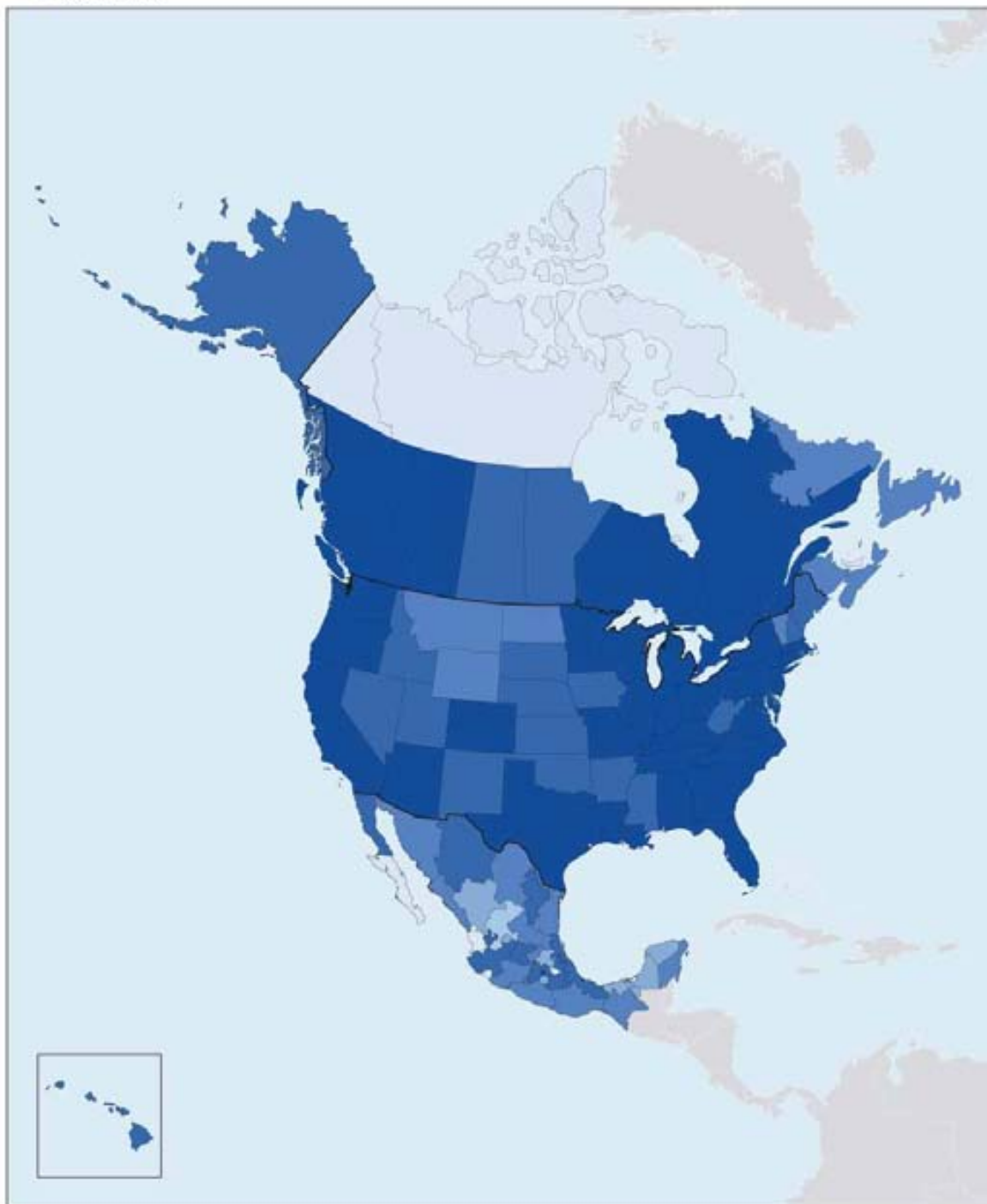
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### 3. GEOGRAPHIC CONCENTRATION OF GDP

#### 3.7. Regional GDP: North America

Millions of constant 2000 USD PPP, 2003



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#### Concentration of GDP and agglomeration economies

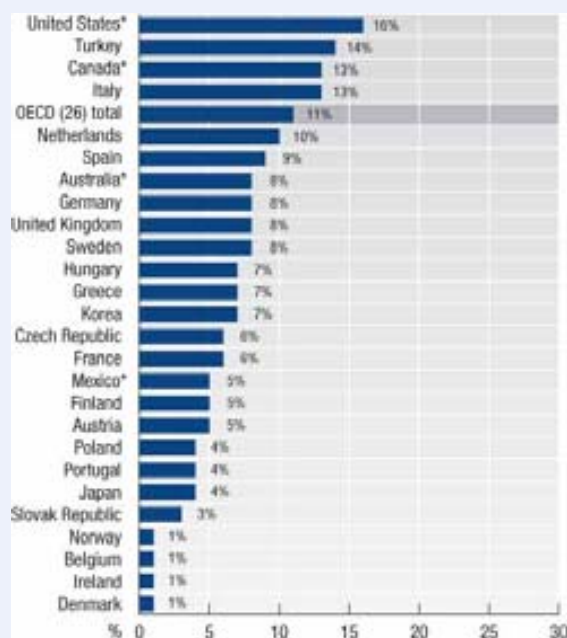
An interesting aspect of the geographic distribution of GDP is that it tends to concentrate in a small portion of the national territory. In Denmark, Ireland, Belgium, Norway, the Slovak Republic, Japan, Portugal and Poland, the 10% of regions with the largest share in national GDP accounted in 2003 for less than 5% of the national area (Figure 3.8). In countries where these regions represent a larger fraction of the national territory, it is still evident that a significant amount of national economic activity takes place within narrow zones or poles of development.

Urban areas and large towns in intermediate regions are prime zones or poles of development. The clustering of businesses and people in a small area improves the efficiency of the local economy and leads to the production of more output per capita. Figure 3.9 reveals that in every country the 10% of regions with the highest concentration of GDP enjoy a GDP per capita well above the national average.

Agglomeration economies are considered to be the main driving force behind the clustering of economic activity. The concept was introduced more than a century ago by Alfred Marshall who identified three sources of agglomeration. First, the advantages that large labour markets entail for firms (easier to find specialised personnel) and skilled workers (easier to find employment) alike. Second, the linkages between intermediate and final-goods producers, which allow firms to benefit from specialisation in some parts of the production process and from increased production volumes. Third, the knowledge spillovers that stem from the cross-fertilisation of ideas regarding innovation. Based on these ideas, modern economists have highlighted the role of sharing (infrastructure, risks, gains from variety, specialisation, etc.), matching (between business partners or firms and employees) and learning (knowledge creation, accumulation and diffusion) as the underlying mechanisms of agglomeration economies.

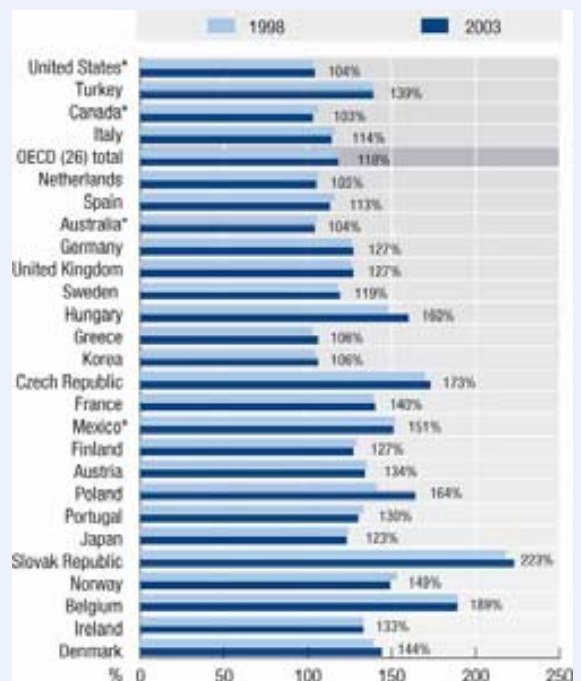
#### 3.8. The 10% of regions with the highest concentration of GDP account for a small fraction of the national area...

Area share of the 10% regions with the highest concentration of GDP, 2003 (TL3)



#### 3.9. ... and their GDP per capita is well above the national average

GDP per capita (% of national GDP per capita) of the 10% of regions with the highest concentration of GDP (TL3)



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## Symbols and Abbreviations

<b>OECD (25) average</b>	Unweighted average of 25 OECD countries.
<b>OECD (25) total</b>	Sum over all regions of 25 OECD countries.
<b>OECD (25)</b>	Range of variation over all regions of 25 OECD countries.
<b>TL2</b>	Territorial Level 2.
<b>TL3</b>	Territorial Level 3
<b>NOG</b>	Non Official Grid
<b>*</b>	Differences in the definition of data or regions. Please check the “Sources and Methodology” section.
<b>PU</b>	Predominantly Urban
<b>IN</b>	Intermediate
<b>PR</b>	Predominantly Rural
<b>PPP</b>	Purchasing Power Parity
<b>USD</b>	United States Dollar









## **I. REGIONS AS ACTORS OF NATIONAL GROWTH**

1. GEOGRAPHIC CONCENTRATION OF POPULATION
2. GEOGRAPHIC CONCENTRATION OF THE ELDERLY POPULATION
3. GEOGRAPHIC CONCENTRATION OF GDP
4. REGIONAL CONTRIBUTIONS TO GROWTH IN NATIONAL GDP
5. GEOGRAPHIC CONCENTRATION OF INDUSTRIES
6. REGIONAL CONTRIBUTIONS TO CHANGES IN EMPLOYMENT
7. GEOGRAPHIC CONCENTRATION OF PATENTS

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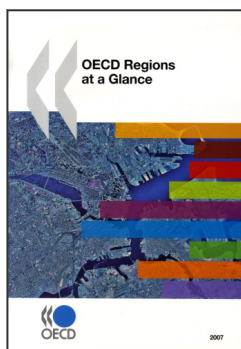
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