

13. GEOGRAPHIC CONCENTRATION OF GDP

Economic activity is unevenly distributed among regions within OECD countries. In 2005, 10% of OECD regions generated 38% of the total gross domestic product (GDP). In Turkey, Greece and Portugal the 10% of regions with the highest output contributed half or more of the national GDP. On the other hand, GDP in Belgium, the Slovak Republic, Denmark and the Netherlands was more evenly distributed among regions, with the regions with the highest output (regions in the top 10%) accounted for no more than a quarter of total GDP (Figure 13.1).

The share of national GDP generated by the 10% regions with largest GDP has increased in the past ten years significantly in Greece (10 percentage points), Hungary and Sweden (5 percentage points), Czech Republic and Finland (4 percentage points).

The geographic concentration index offers a picture of the spatial distribution of GDP among all regions within a country, by comparing the share of GDP and land area share over all the regions in a given country. This index shows that in 2005 concentration was greatest in Portugal, Sweden and the United Kingdom. With the exception of Korea, in all OECD countries GDP is more concentrated than population, reflecting the fact that agglomeration economies tend to perform more capital-intensive activities (Figure 13.2).

Between 1995 and 2005 the geographic concentration index increased in OECD countries of 1.2 point. Greece and Hungary displayed the highest increase in the concentration index (8.7 and 6.4 points respectively). This increased was essentially due to the increased share of national GDP of three regions: Attiki (Greece), Budapest and Pest (Hungary). On the other hand, according to the concentration index, GDP is more equally distributed than it was in 1995 in Australia, Korea, Turkey, Germany, Mexico, Austria, Portugal, the United States and New Zealand (Figure 13.3).

Predominantly urban regions attracted the largest share of economic activities. In 2005, 55% of total GDP in OECD countries was produced in urban regions. Predominantly rural areas contributed 13% to overall GDP, even though in Ireland and in the Scandinavian countries rural regions produced above 40% of their national GDP (Figure 13.4).

Definition

Gross domestic product (GDP) is the standard measure of the value of the production activity (goods and services) of resident producer units. Regional GDP is measured according to the definition of the 1993 System of National Accounts. To make comparisons over time and across countries, it is expressed at constant prices (year 2000), using the OECD deflator and then it is converted into USD purchasing power parities (PPPs) to express each country's GDP into a common currency.

The geographic concentration index offers a picture of the spatial distribution of the GDP within each country, as it compares the GDP weight and the land area weight over all TL3 regions (see Annex C for the formula). The index ranges between 0 and 100: the higher its value, the larger the regional concentration of GDP relative to the area. International comparisons of the index can be affected by the different size of regions.

Source

OECD Regional Database, <http://dotstat/wbos/>, theme: Regional Statistics.

OECD deflator and purchasing power parities, <http://dotstat/wbos/>, Reference series.

See Annex B for data sources and country related metadata.

Reference years and territorial level

1995-2005; TL3

Australia, Canada, Mexico and United States only TL2.

Regional GDP is not available for Iceland and Switzerland.

Figure notes

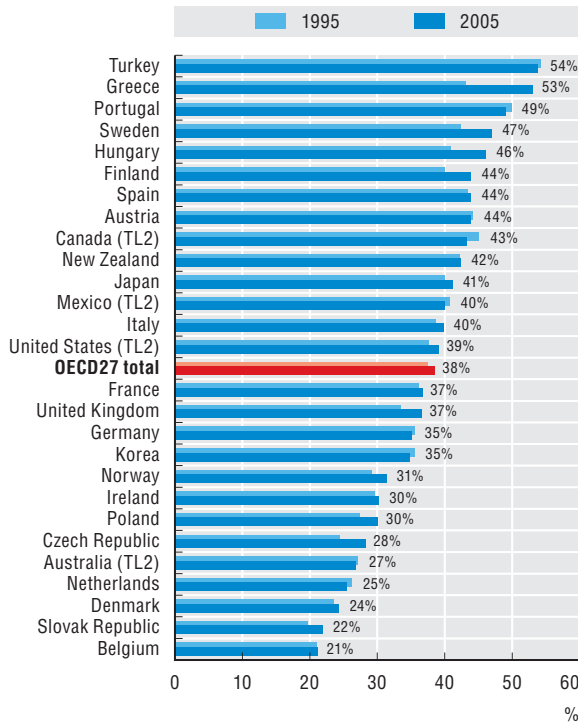
Figures 13.1 to 13.4: Available data, last year: Mexico 2004, New Zealand 2003 and Turkey 2001. First year: United States 1997.

Figure 13.4: Australia, Canada, Mexico and the United States are excluded since GDP is available only at the TL2 level.

13. GEOGRAPHIC CONCENTRATION OF GDP

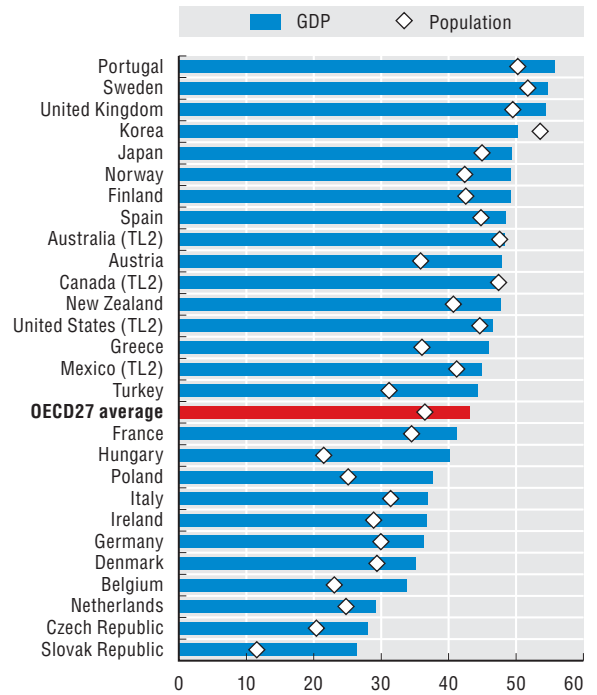
13.1 Percentage of national GDP in the 10% of TL3 regions with largest GDP

In Turkey, 54% of national GDP was concentrated in 10% of regions in 2005.



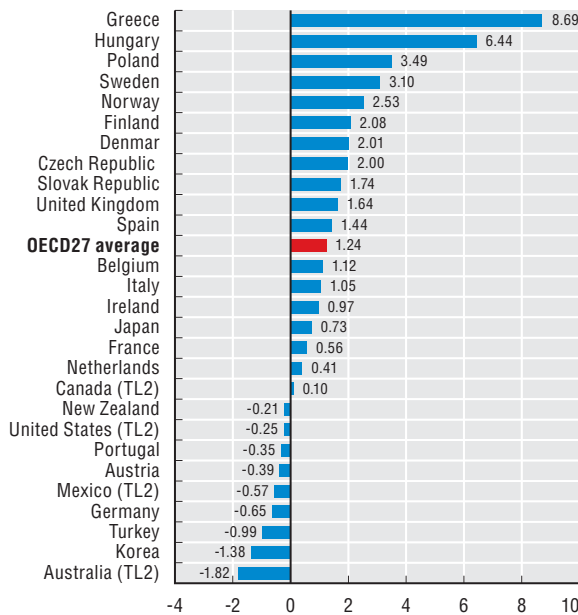
13.2 Geographic concentration index of GDP and population (TL3 regions), 2005

In 2005, GDP was more geographically concentrated than population in all OECD countries, except Korea.



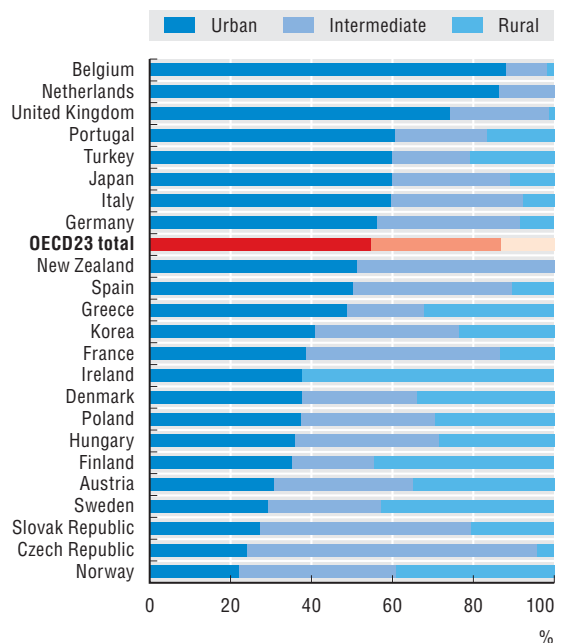
13.3 Point change in the geographic concentration index of GDP between 1995 and 2005

From 1995 to 2005, Greece had the largest increase in the index of the geographic concentration of GDP.



13.4 Distribution of GDP into PU, IN and PR TL3 regions, 2005

In 2005, 55% of total GDP in OECD countries was produced in urban regions.

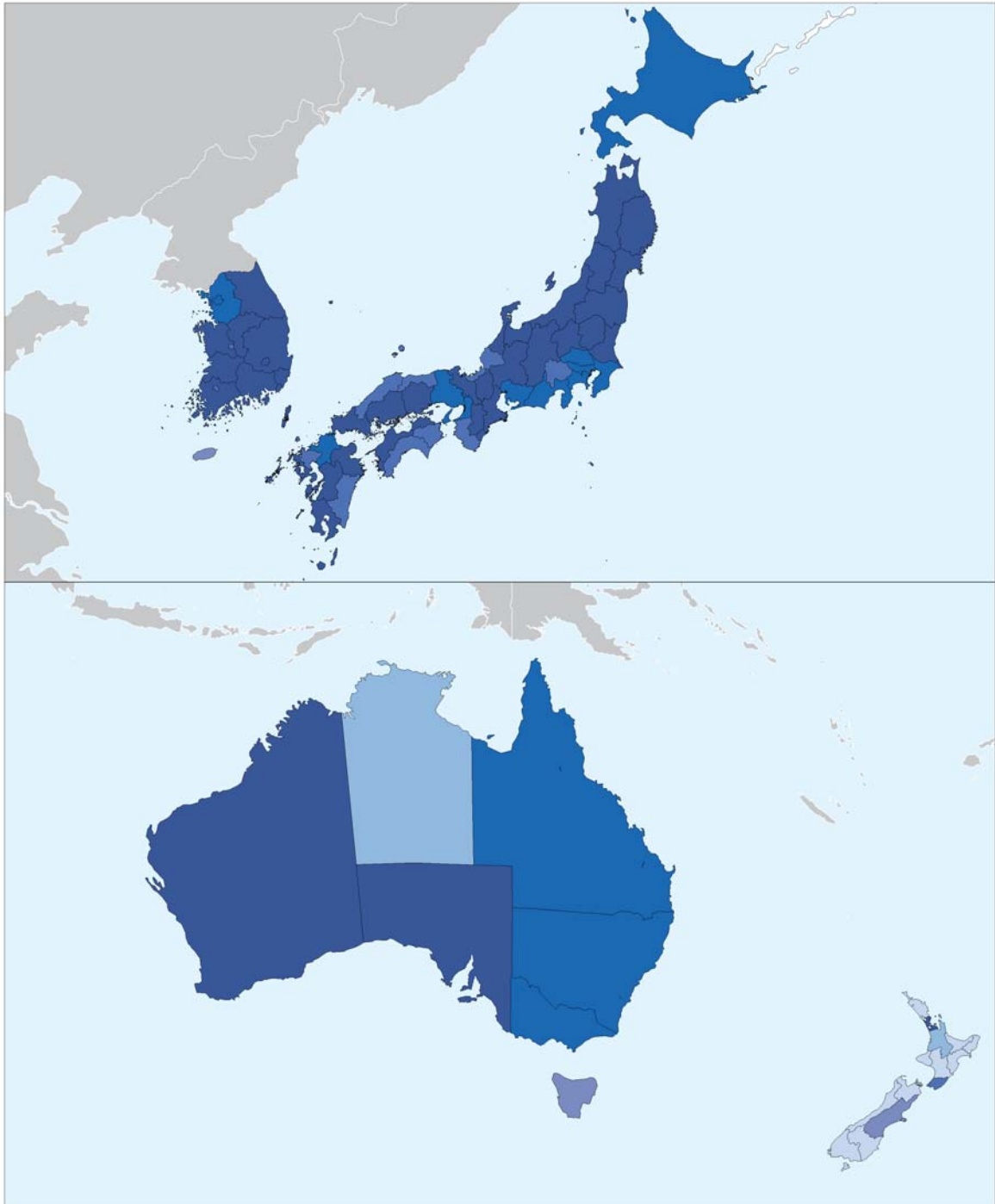


13. GEOGRAPHIC CONCENTRATION OF GDP

13.5 Regional GDP: Asia and Oceania

Millions of constant 2000 USD PPP, TL3 regions, 2005

- Higher than 100 000
- Between 25 000 and 100 000
- Between 12 000 and 25 000
- Between 8 000 and 12 000
- Between 5 000 and 8 000
- Lower than 5 000
- Data not available



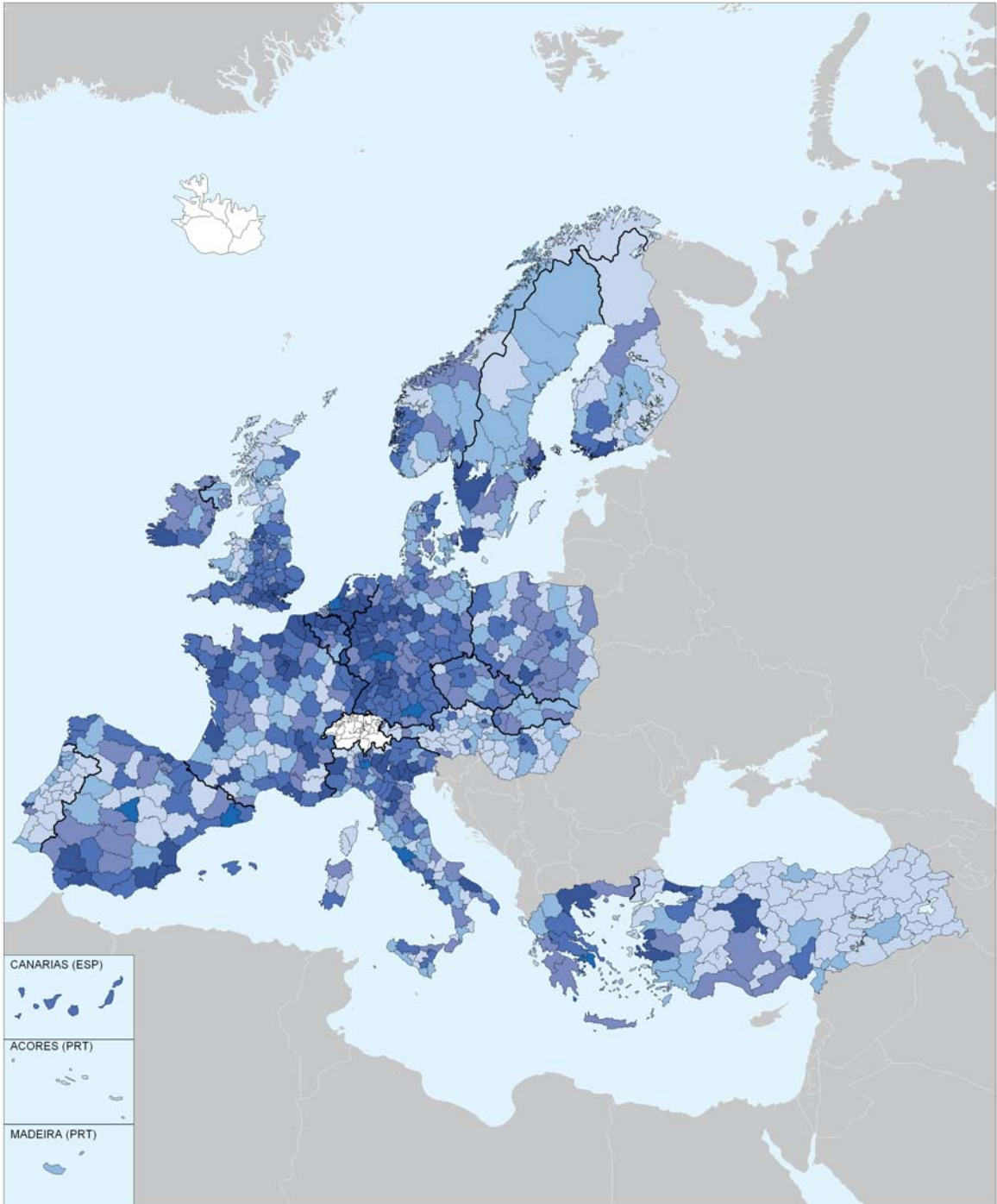
Australia TL2 regions.

StatLink  <http://dx.doi.org/10.1787/524663202301>

13.6 Regional GDP: Europe

Millions of constant 2000 USD PPP, TL3 regions, 2005

- Higher than 100 000
- Between 25 000 and 100 000
- Between 12 000 and 25 000
- Between 8 000 and 12 000
- Between 5 000 and 8 000
- Lower than 5 000
- Data not available



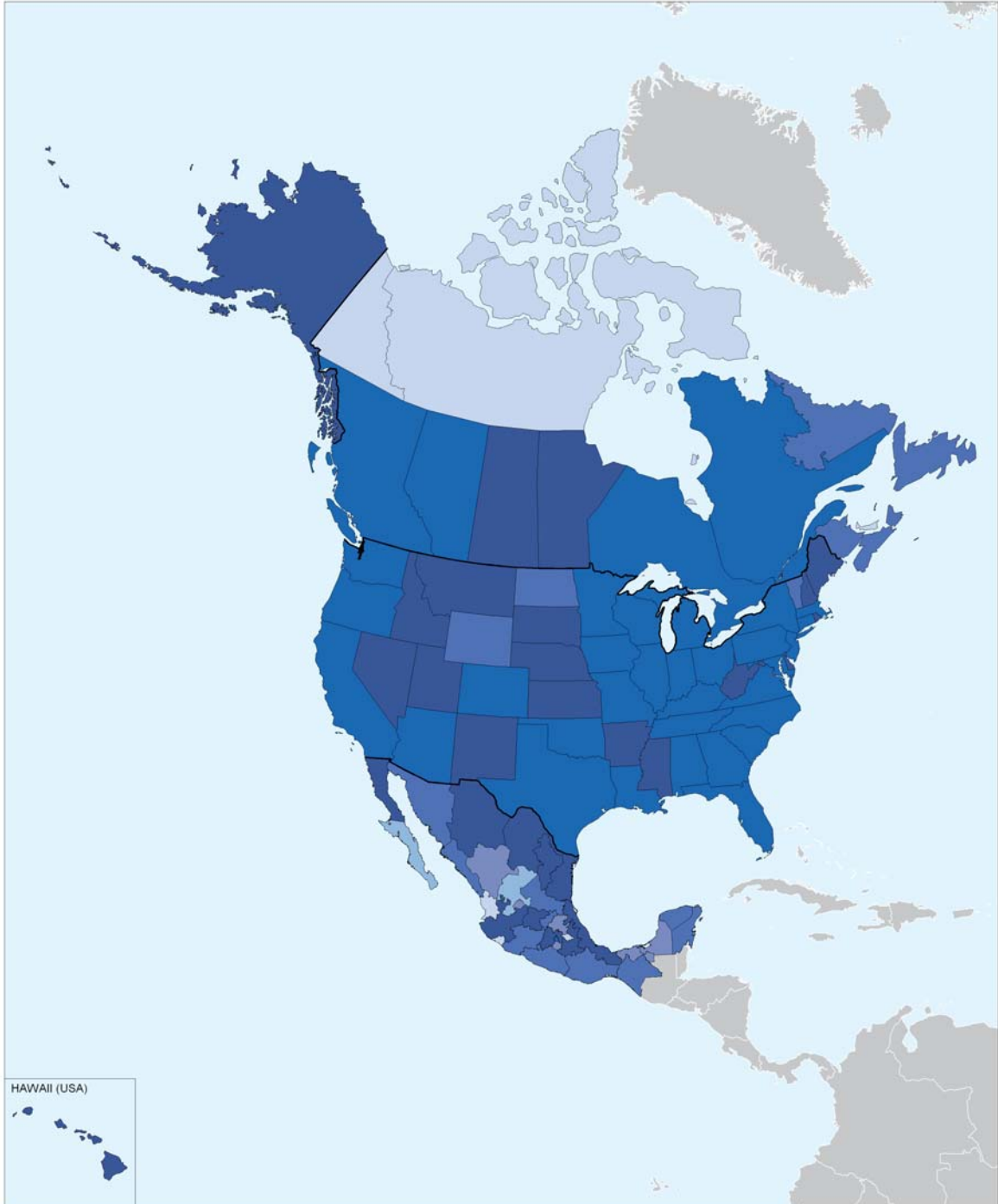
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13. GEOGRAPHIC CONCENTRATION OF GDP

13.7 Regional GDP: North America

Millions of constant 2000 USD PPP, TL2 regions, 2005

- Higher than 100 000
- Between 25 000 and 100 000
- Between 12 000 and 25 000
- Between 8 000 and 12 000
- Between 5 000 and 8 000
- Lower than 5 000
- Data not available



StatLink  <http://dx.doi.org/10.1787/524663202301>

Concentration of GDP and agglomeration economies

National economic activity is concentrated in only a few regions: the regions with the largest GDP within each OECD country together accounted for 16% of total OECD GDP in 2005. Within each country, the highest GDP region in 2005 accounted for a different share of the national GDP – ranging from 5% in Munich (Germany) to 49% in Attiki (Greece) (Figure 13.8).

The regions with the largest output within each country in 2005 display three common characteristics: they are urban regions, in most of the cases containing the capital city; they occupy an area ranging from less than 1% of the national area to at most 10%, confirming that a large part of national economy takes place in narrow zones or poles of development (Figure 13.9); and finally, they maintain their position over time, these regions were already the ones with largest output in their countries in 1995, with the only exceptions being Munich (Germany) and Warsaw (Poland).

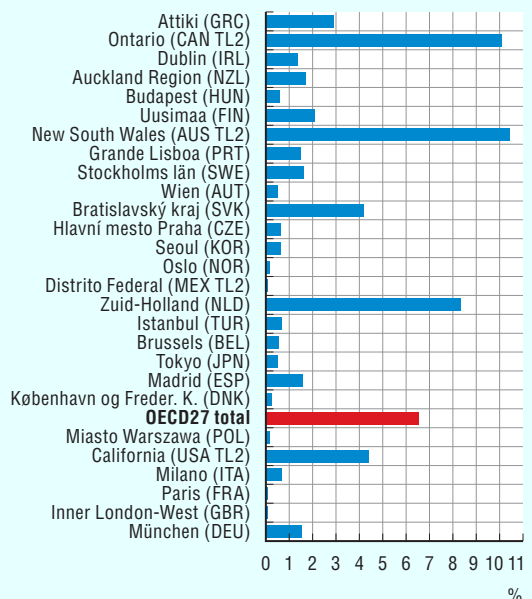
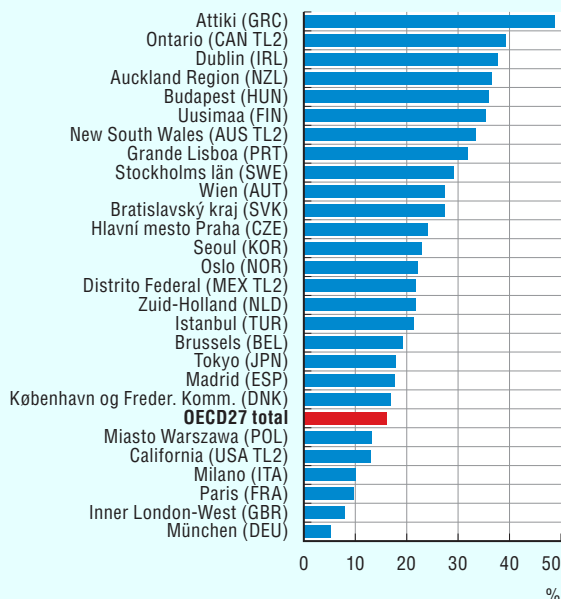
Over the past ten years, most of them (20 out of 27) increased their share of national output; Attiki (Greece), Stockholm (Sweden) and Hlavní mesto Praha (Czech Republic) by more than 4 percentage points, while Seoul (Korea) and Ontario (Canada) decreased their share of GDP as a per cent of national GDP by more than 1 percentage point.

The concentration of economic activity occurs due to the benefit of agglomeration. The relative growth of these urban regions is related to their ability to attract businesses and people. People tend to move to places where job opportunities are plentiful and firms tend to locate in large markets (of labour and goods) where economies of scale can be achieved. Nevertheless, concentrations are not necessarily the places for an efficient allocation of resources and among OECD member countries there is not unequivocal evidence on the link between concentration and the level of well-being. A more geographically balanced development within countries tends to reduce possible costs of concentration (like congestion, quality of the environment, sufficient supply of services and labour force, etc.) and may help in increasing the economic growth of the entire country by spurring demand.

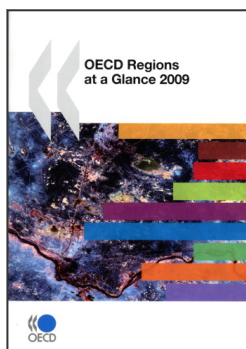
13.8 Percentage of national GDP produced by the highest producing TL3 region in the country, 2005¹

13.9 Percentage of national land area of the highest GDP producing TL3 region in the country, 2005

In 2005, Attiki, Greece, contributed 40% of national aggregate GDP and represented 3% of national land area.



1. Available data: Mexico 2004, New Zealand 2003 and Turkey 2001. Australia, Canada, Mexico and the United States TL2 regions.



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