

## 10. REGIONAL DISPARITIES IN SPECIALISATION

Regional specialisation varies considerably among OECD countries. Specialisation is commonly measured by the Balassa-Hoover index: the ratio between an industry's weight in a region and its weight in the country overall. A region is specialised in an industry when the index is above 1 and it is not specialised when the index is below 1. A region's degree of specialisation, therefore, can be measured as the weighted average of its degrees of specialisation in each industry. The higher this value, the more specialised the region.

In 2003, international differences in regional specialisation – the average degree of specialisation for all regions of a given country – ranged from 0.21 in Denmark to 0.62 in Korea (Figure 10.1).

### Significant regional differences

These aggregate figures hide even larger differences among regions within countries. In 2003, the lowest degree of regional specialisation was observed in the Swedish region of Sydsverige

(0.08), while the Mexican region of Campeche (1.87) recorded the highest (Figure 10.2). In Korea, Mexico, the United States and Sweden, the difference between the regions with the lowest and highest degree of specialisation was no less than 1. The differences were smaller but still considerable in Spain, Italy, Belgium and the Czech Republic (between 0.37 and 0.55). The differences were the smallest in Greece (0.11), Denmark (0.12), Iceland and Hungary (0.13).

While the range reveals the difference between the region with the lowest and the highest degree of specialisation, the Gini index measures disparities among all regions of a given country. The index ranges between 0 and 1: the higher its value, the larger the regional differences.

In 2003, the Gini index (Figure 10.3) demonstrated that the countries with the greatest differences in degrees of regional specialisation were Korea (0.60), Sweden (0.48), Ireland (0.44) and Belgium (0.38). Those with the least difference were Greece and Hungary (0.11), Portugal (0.17), France (0.18) and Denmark (0.19).

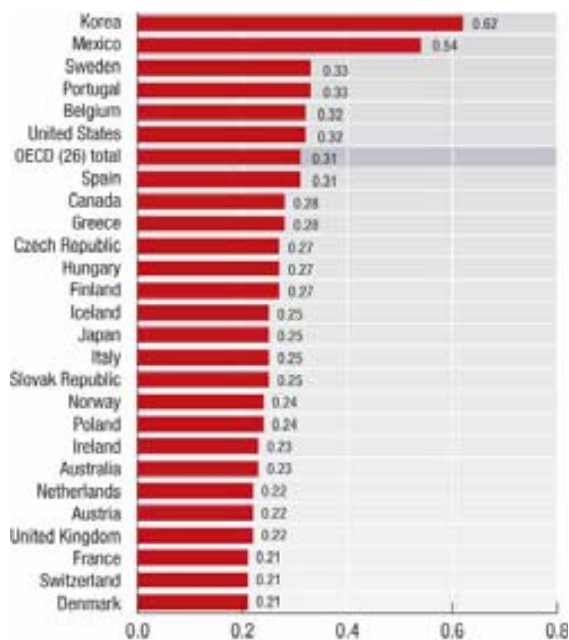
### Definition

Specialisation in an industry is measured as the ratio of an industry's share of employment in a region to its share in the country as a whole (Balassa-Hoover index). A value of the index above 1 shows greater specialisation than in the country as a whole and a value below 1 shows less specialisation. A region's average degree of specialisation is the average of the sum of the absolute deviations from 1 of the Balassa-Hoover index over all industries (International Standard Industrial Classification [ISIC] Rev. 3.1 one digit).

## 10. REGIONAL DISPARITIES IN SPECIALISATION

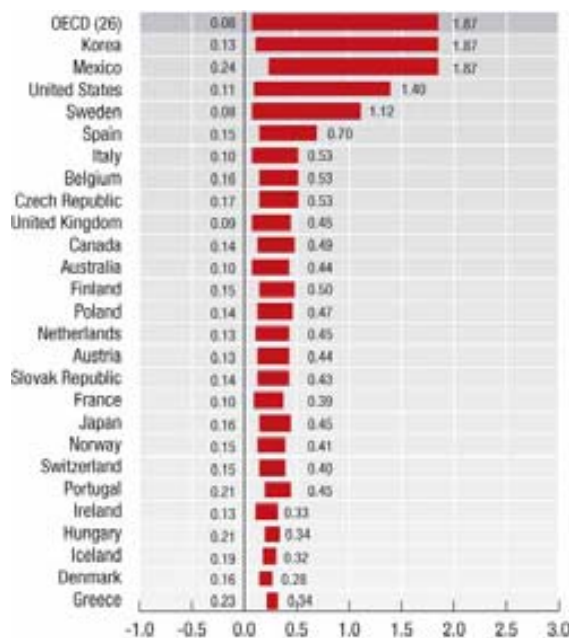
### 10.1. In 2003 Korea, Mexico and Sweden had, on average, the highest degree of specialisation within regions

Average regional specialisation, 2003 (TL2)  
(across one-digit ISIC industries)



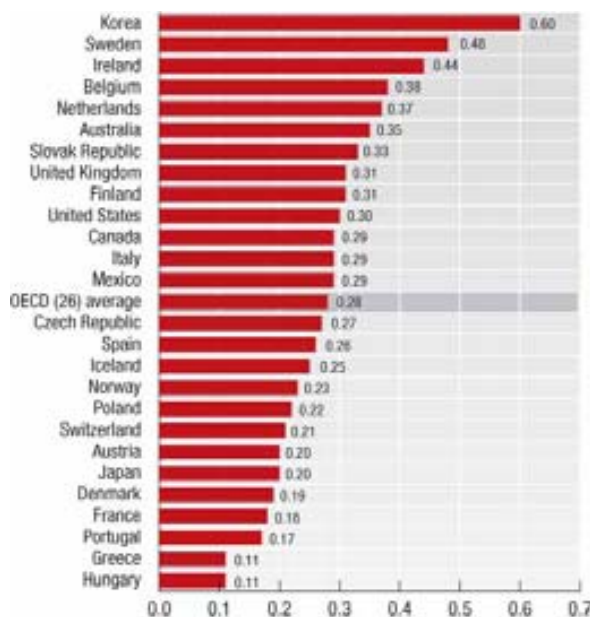
### 10.2. The degree of specialisation varies significantly across regions within countries

Range in the degree of industry specialisation across regions within a country, 2003 (TL2)



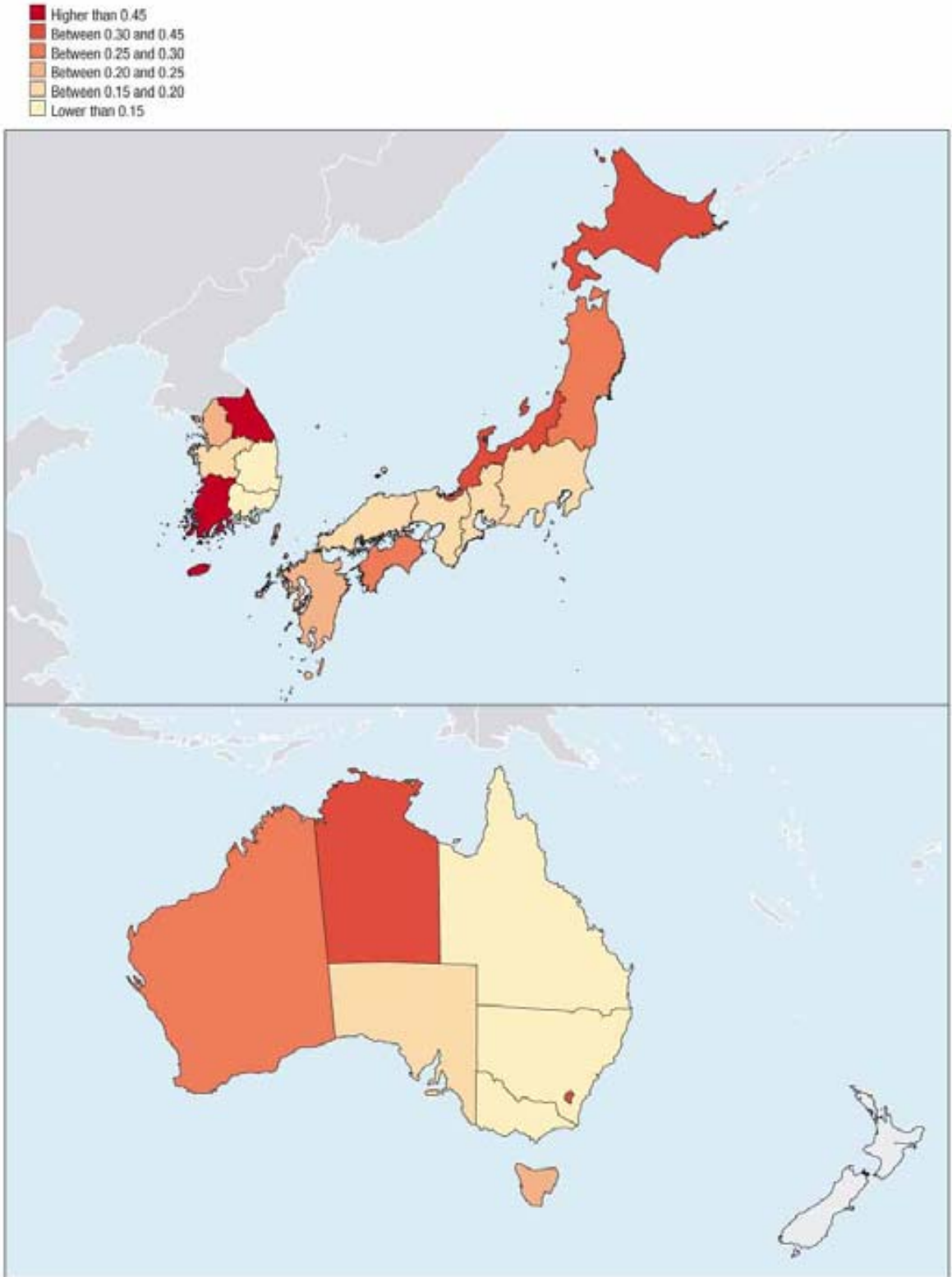
### 10.3. Korea, Sweden and Ireland showed the largest differences in the degree of regional specialisation

Gini index of inequality of industry specialisation across regions, 2003 (TL2)



## 10.4. Regional specialisation: Asia and Oceania

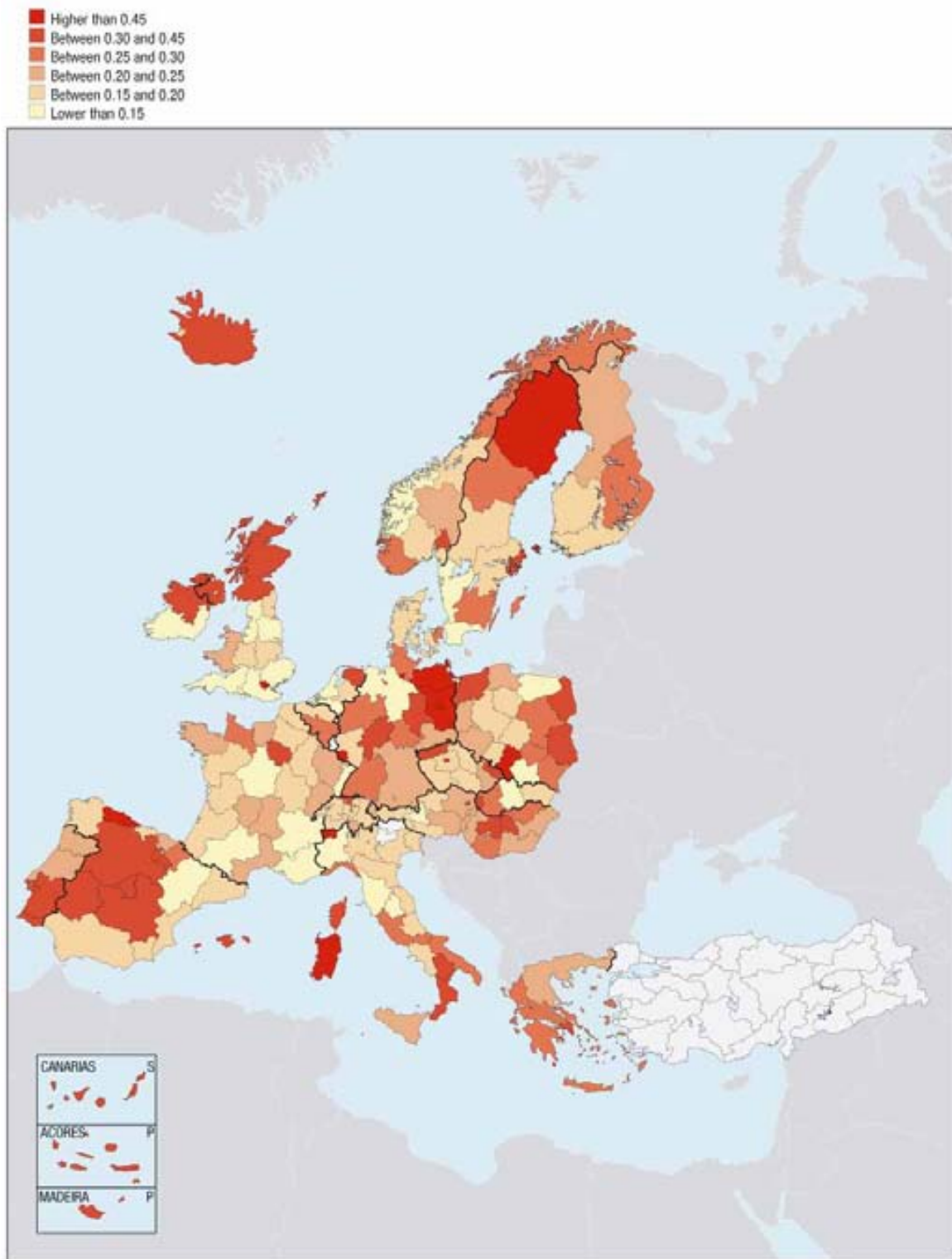
Average degree of specialisation across industries, 2003




StatLink  <http://dx.doi.org/10.1787/573302327337>

## 10.5. Regional specialisation: Europe

Average degree of specialisation across industries, 2003

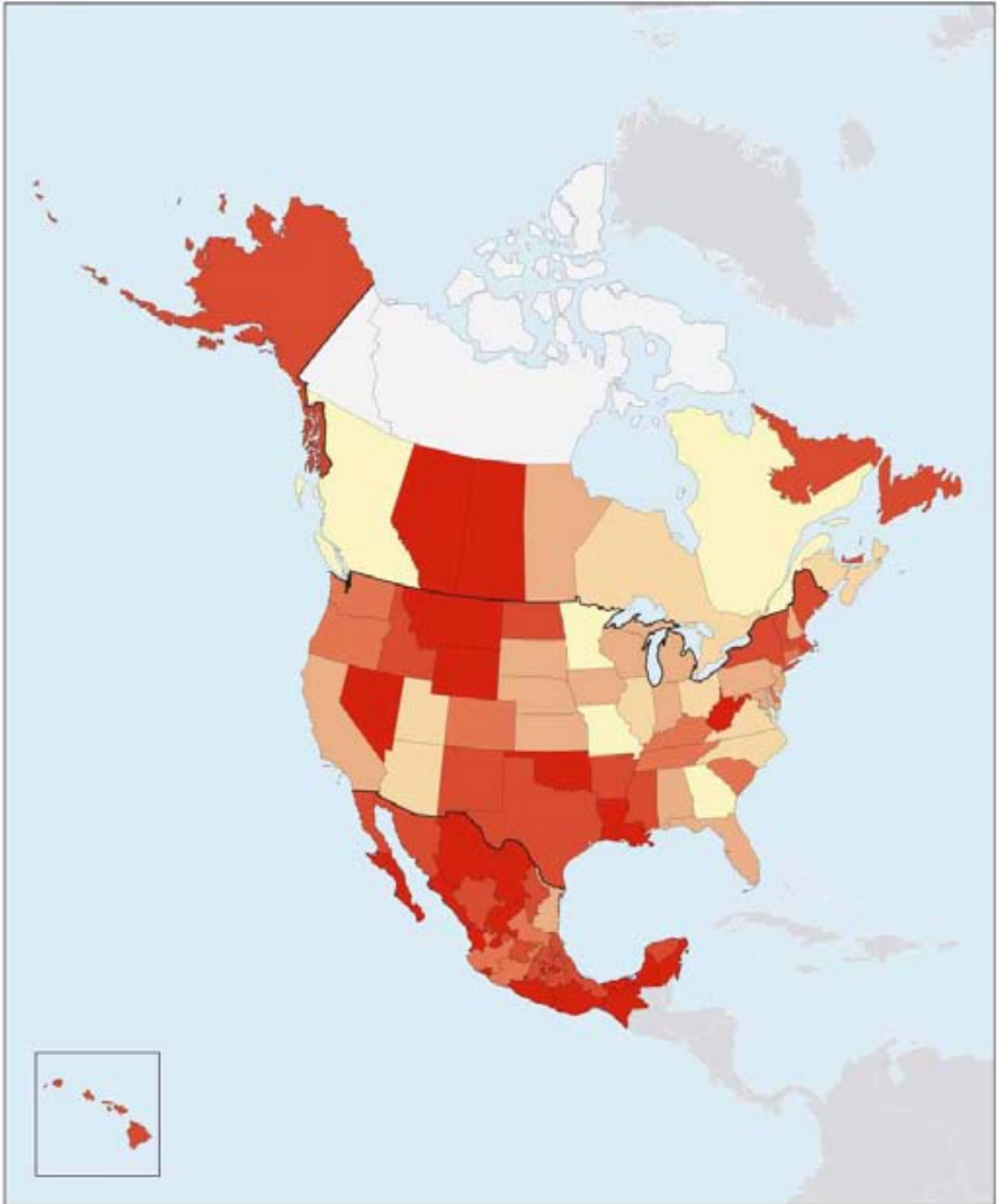


StatLink  <http://dx.doi.org/10.1787/573302327337>

## 10.6. Regional degree of specialisation: North America

Average degree of specialisation across industries, 2003

- Higher than 0.45
- Between 0.30 and 0.45
- Between 0.25 and 0.30
- Between 0.20 and 0.25
- Between 0.15 and 0.20
- Lower than 0.15



StatLink  <http://dx.doi.org/10.1787/573302327337>



### Construction and financial intermediation are the industries with the highest specialisation indexes

A region's degree of specialisation in an industry can be measured as the difference between the Balassa-Hoover index and 1. Higher values of the index above 1 reflect greater specialisation, and lower values below 1 indicate less specialisation than the national average. A region's average degree of specialisation, therefore, is obtained by averaging the absolute deviations from 1 of the Balassa-Hoover indexes of all industries within the region.

Table 10.7 displays the region with the greatest degree of specialisation in each OECD country and the corresponding Balassa-Hoover index of all industries for 2003. In a large number of these regions, the greatest degree of specialisation was recorded in financial intermediation (j) and construction (c). The financial intermediation industry displayed the highest specialisation index in Belgium, the Czech Republic, Denmark, Greece, Norway, Portugal, the Slovak Republic and the United Kingdom, while construction was the highest in Mexico, the Netherlands, Poland, Spain, Sweden, Switzerland and the United States.

The regions with the highest degree of specialisation in Canada, Iceland, Japan and Korea are specialised in agriculture, hunting, forestry and fishing (a+b); while the most specialised regions in Ireland and Italy are specialised in hotels and restaurants (h), and in Austria and Hungary they are specialised in real estate and business activities (k).

Finally the most specialised regions in France, Finland and Australia are specialised in electricity, gas and water supply (e), transport, storage and communication (i) and health and social work (o+p), respectively.

#### 10.7. Regions with the highest degree of specialisation

Country	Region (TL2)	Average degree of regional specialisation	Standard Industrial Classification (ISIC) Rev. 3.1												
			a + b	c	d	e	f	g	h	i	j	k	m	n	o + p
Australia	Australian Cap. Territory	0.44	0.10	0.06	0.40	1.16	0.91	0.88	1.33	0.85	0.50	1.53	1.50	1.14	<b>1.80</b>
Austria	Wien	0.44	0.05	0.07	0.57	1.15	0.88	1.11	0.87	1.30	1.72	<b>1.82</b>	1.19	1.33	1.53
Belgium	Bruxelles	0.53	0.04	0.20	0.44	1.42	0.52	0.92	1.17	1.30	<b>3.25</b>	1.21	0.98	0.83	1.47
Canada	Saskatchewan	0.49	<b>3.64</b>	2.90	0.39	1.04	0.86	1.06	1.09	0.96	1.06	0.64	1.25	1.13	0.96
Czech Republic	Praha	0.53	0.09	0.04	0.36	0.87	1.02	1.19	1.25	1.37	<b>2.50</b>	2.14	0.93	1.05	1.71
Denmark	Hovedstadsregionen	0.28	0.21	0.46	0.63	1.01	0.87	1.05	1.14	1.20	<b>1.58</b>	1.47	1.02	1.01	.
Finland	Aland	0.50	1.10	.	0.44	0.95	0.87	0.75	1.39	<b>4.05</b>	1.51	0.43	0.93	0.79	0.94
France	Corse	0.39	1.19	0.70	0.34	<b>1.72</b>	1.69	1.27	1.69	1.33	0.64	0.57	1.28	1.11	0.95
Greece	Attiki	0.34	0.07	0.24	1.15	0.94	1.07	1.19	0.82	1.39	<b>1.63</b>	1.49	1.01	1.21	1.38
Hungary	Kosep-Magyarország	0.34	0.27	0.18	0.75	0.60	1.10	1.19	0.94	1.18	1.48	<b>1.70</b>	0.90	0.96	1.39
Iceland	Other Regions	0.32	<b>2.22</b>	.	1.33	1.12	1.13	0.75	0.89	0.78	0.63	0.55	0.90	0.82	.
Ireland	Border, Midlands and Western	0.33	1.38	1.48	0.91	0.85	1.00	0.87	<b>2.60</b>	0.71	0.52	0.54	0.89	0.95	0.88
Italy	Valle D'aosta	0.53	1.22	2.41	0.55	2.37	1.73	0.79	<b>2.44</b>	1.18	0.80	0.74	1.13	1.20	0.95
Japan	Hokkaido	0.45	<b>3.30</b>	2.31	0.55	1.20	1.37	1.08	1.10	1.14	1.01	0.97	0.79	1.17	.
Korea	Jeju	1.87	<b>19.80</b>	0.95	0.23	1.25	1.21	1.17	1.80	1.28	1.30	0.61	1.14	1.23	.
Mexico	Campeche	1.87	5.43	<b>15.37</b>	0.43	0.89	1.69	0.89	1.34	0.95	0.13	1.18	0.62	0.68	.
Netherlands	Noord-Nederland	0.45	1.50	<b>4.43</b>	1.14	1.16	1.05	0.91	1.01	0.80	0.83	0.74	1.16	1.18	.
Norway	Oslo	0.41	0.02	0.24	0.62	0.46	0.73	1.16	1.05	1.21	<b>1.67</b>	1.66	0.91	0.91	1.44
Poland	Slaskie	0.47	0.34	<b>5.24</b>	1.04	1.31	1.21	1.09	1.10	1.06	0.80	1.09	0.95	1.07	1.02
Portugal	Lisboa	0.45	0.11	0.33	0.58	1.29	0.89	1.20	1.29	1.45	<b>2.10</b>	2.00	1.01	1.08	1.33
Slovak Republic	Bratislav Kraj	0.43	0.29	0.29	0.60	0.66	0.95	1.03	1.05	1.15	<b>2.45</b>	1.86	0.73	0.75	1.38
Spain	Asturias	0.70	0.83	<b>8.81</b>	0.95	1.27	1.07	1.06	0.91	0.94	0.85	0.86	1.13	1.02	0.98
Sweden	Oevre Norrland	1.12	1.14	<b>13.23</b>	0.79	1.24	1.08	0.76	0.94	0.98	0.62	0.73	1.33	1.28	0.95
Switzerland	Nordwestschweiz	0.40	0.68	<b>4.96</b>	1.14	1.20	0.99	1.04	0.72	1.05	0.99	1.04	0.93	1.03	0.92
United Kingdom	London	0.45	0.12	0.25	0.48	0.42	0.73	0.85	1.04	1.29	<b>1.95</b>	1.60	0.78	0.76	1.38
United States	Wyoming	1.40	1.51	<b>14.41</b>	0.38	2.00	1.49	1.07	1.48	1.19	0.73	1.11	0.45	0.82	0.72

## 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

## Table of Contents

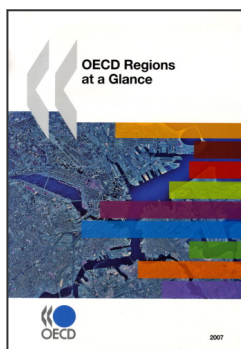
<b>Executive Summary</b> .....	7
<b>Symbols and abbreviations</b> .....	11
<b>I. Regions as Actors of National Growth</b>	
1. <b>Geographic concentration of population</b> .....	14
2. <b>Geographic concentration of the elderly population</b> .....	20
3. <b>Geographic concentration of GDP</b> .....	26
4. <b>Regional contributions to growth in national GDP</b> .....	32
5. <b>Geographic concentration of industries</b> .....	38
6. <b>Regional contributions to changes in employment</b> .....	44
7. <b>Geographic concentration of patents</b> .....	50
<b>II. Making the Best of Local Assets</b>	
8. <b>Regional disparities in GDP per capita</b> .....	58
9. <b>Regional disparities in labour productivity</b> .....	64
10. <b>Regional disparities in specialisation</b> .....	70
11. <b>Regional disparities in tertiary education attainment</b> .....	76
12. <b>Regional disparities in unemployment rates</b> .....	82
13. <b>Regional disparities in participation rates</b> .....	88
<b>The Key Drivers of Regional Growth</b>	
14. <b>The factors behind regional performance</b> .....	96
15. <b>Regional growth in the OECD</b> .....	98
16. <b>National factors and regional performances</b> .....	102
17. <b>Regional factors: GDP per capita and population</b> .....	106
18. <b>Regional factors: productivity and specialisation</b> .....	110
19. <b>Regional factors: employment, participation and ageing</b> .....	114
<b>III. Competing on the Basis of Regional Well-being</b>	
20. <b>Accessibility: distance from the closest urban centre</b> .....	120
21. <b>Education: student enrolments in tertiary education</b> .....	124
22. <b>Voter turnout in national elections</b> .....	128
23. <b>Safety: reported crimes against property</b> .....	132
24. <b>Safety: reported murders</b> .....	136
25. <b>Home ownership</b> .....	140
26. <b>Environment: private vehicle ownership</b> .....	144
27. <b>Environment: municipal waste</b> .....	148

## IV. Regional Focus on Health

28. Health: age-adjusted mortality rate .....	154
29. Health status: premature mortality .....	160
30. Health status: incidence of cancer .....	166
31. Health resources: number of physicians .....	172
32. Health resources: density of practising nurses .....	178
33. Health resources: hospital beds .....	182
34. Health resources: medical technology .....	188
35. Non-medical determinants of health: prevalence of smoking .....	194
36. Non-medical determinants of health: prevalence of obesity .....	198

## Source and Methodology

<b>Territorial Grids and Regional Typology</b> .....	205
Regional grids .....	205
Regional typology .....	205
Population – Chapters: 1, 8, 17, 21, 23, 24, 26, 27, 30, 31, 32, 33, 34, 35, 36 .....	214
Population by age and sex – Chapters: 2, 11, 13, 19, 28 .....	215
Gross domestic product – Chapters: 3, 4, 8, 9, 15, 16, 17, 18, 19 .....	217
Employment by industry – Chapters: 5, 10, 18 .....	219
Labour force, employment, unemployment and long-term unemployment – Chapters: 6, 9, 12, 13, 18, 19 .....	220
Employment at place of work – Chapter 9 .....	222
Patent applications – Chapter 7 .....	223
Educational attainments – Chapter 11 .....	224
Time distance from the closest urban centre – Chapter 20 .....	226
Student enrolment in tertiary education – Chapter 21 .....	228
Voter turnout in national elections – Chapter 22 .....	229
Crimes against property – Chapter 23 .....	230
Number of murders – Chapter 24 .....	232
Number of dwellings inhabited by the owner; total number of occupied dwellings – Chapter 25 .....	234
Number of private vehicles – Chapter 26 .....	235
Volume of produced waste – Chapter 27 .....	236
Death by age and sex: Chapters 28, 29 .....	237
Number of new cases of cancer – Chapter 30 .....	239
Number of physicians – Chapter 31 .....	240
Number of nurses – Chapter 32 .....	242
Number of hospital beds – Chapter 33 .....	244
Number of CT scanners and MRI units – Chapter 34 .....	246
Number of smokers aged 15 and over – Chapter 35 .....	247
Number of people suffering from obesity – Chapter 36 .....	248
<b>Indexes and Formulas</b> .....	249
The drivers of regional growth .....	251



**From:**  
**OECD Regions at a Glance 2007**

**Access the complete publication at:**  
[https://doi.org/10.1787/reg\\_glance-2007-en](https://doi.org/10.1787/reg_glance-2007-en)

**Please cite this chapter as:**

OECD (2008), "Regional disparities in specialisation", in *OECD Regions at a Glance 2007*, OECD Publishing, Paris.

DOI: [https://doi.org/10.1787/reg\\_glance-2007-12-en](https://doi.org/10.1787/reg_glance-2007-12-en)

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org). Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at [info@copyright.com](mailto:info@copyright.com) or the Centre français d'exploitation du droit de copie (CFC) at [contact@cfcopies.com](mailto:contact@cfcopies.com).