In today's knowledge-based economy a region's growth prospects depend to a large extent on its ability to generate and use innovation. This capability, in turn, depends, among other factors, on the skills level of the regional labour force. The proportion of the adult population with tertiary education is a common proxy for a region's skills level. It includes university-level education, from courses of short and medium duration to advanced research qualifications.

Figure 11.1 shows large differences in tertiary education attainment in OECD countries. In 2001, the proportion of the adult population with tertiary education was highest in Canada (42%) and the United States (37%). In Italy, Portugal and Turkey, it was less than 11%.

Regional differences are substantial

Significant differences among countries hide even larger differences among regions. In France, Australia, the United Kingdom and Canada, differences in tertiary attainments in 2001 exceeded 30 percentage points (Figure 11.2). These differences were also considerable (between 20 and 30 percentage points) in New Zealand, Japan, the United States, Mexico, Hungary, Norway, Korea, Poland, Spain and Denmark. Only in Switzerland and Austria did tertiary attainment reveal a more balanced regional pattern.

While the range concerns the difference between the regions with the lowest and the highest attainment in tertiary education, 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 disparities.

Mexico shows the largest variations

In 2001 the country with the highest Gini index was Mexico (0.33), followed by New Zealand, Poland and the Czech Republic (0.20). For most countries the Gini index ranged between 0.10 and 0.20. Only Finland (0.07), Switzerland (0.08) and Sweden (0.09) had a value below 0.10 (Figure 11.3).

On average, 57% of the OECD adult population possessing tertiary education lives in urban regions, 19% in intermediate regions and 24% in rural ones (Figure 11.4). Poland and Denmark show the most balanced distribution of skills among the three types of region: respectively 37% and 38% in urban regions, 34% and 32% in intermediate regions and 29% and 30% in rural ones. Most other countries show significantly higher shares in urban regions, with the Netherlands and Belgium reaching 88% and 85%, respectively. In only a few countries is the share of the population with advanced qualifications higher in rural or intermediate regions. The ratio is higher in rural regions in Ireland (59%), Finland (55%), Austria (46%) and Sweden (42%) and in intermediate regions in the Czech Republic (70%), Switzerland (66%), the Slovak Republic (55%), Turkey (51%) and Spain (46%).

Migration increases the variations

Concentration of tertiary-level attainment in urban regions is often the result of migration away from rural areas. The existence of significant differentials in the return to education between rural and urban areas is a major incentive for individuals with advanced educational levels to migrate to urban regions.

Definition

The tertiary-level attainment rate is defined as the number of persons in the 25-64 age group who have completed tertiary educational programmes as a percentage of all persons of the same age. Tertiary education includes both university studies and advanced professional programmes.

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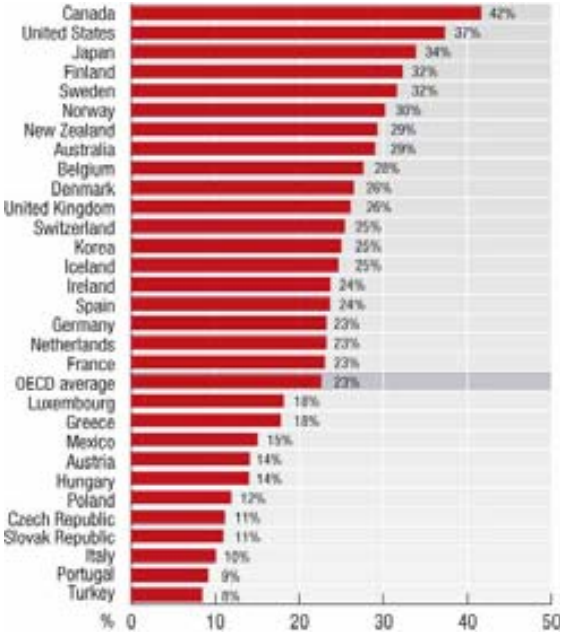
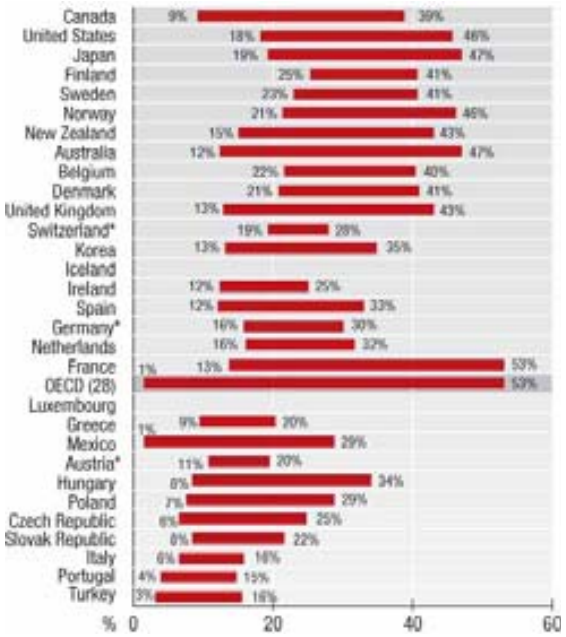
11.1. **Tertiary attainment rates vary significantly among OECD countries**

National tertiary attainment rate, 2001



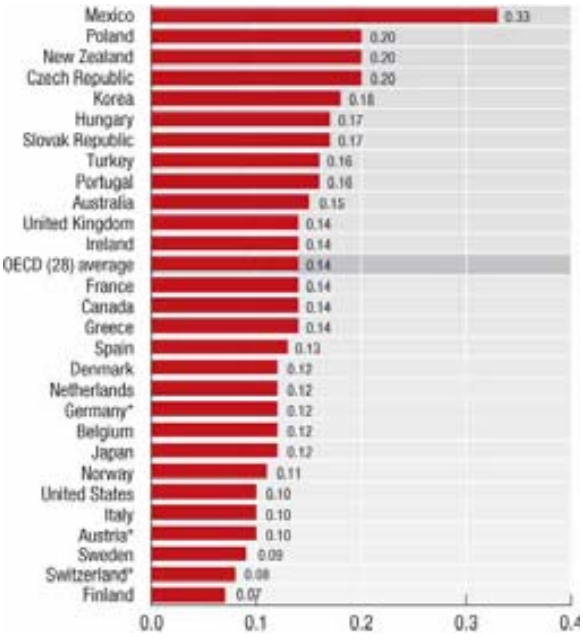
11.2. **... but disparities in tertiary attainments are even larger among regions**

Range of tertiary attainment rates across regions within each country, 2001 (TL3)



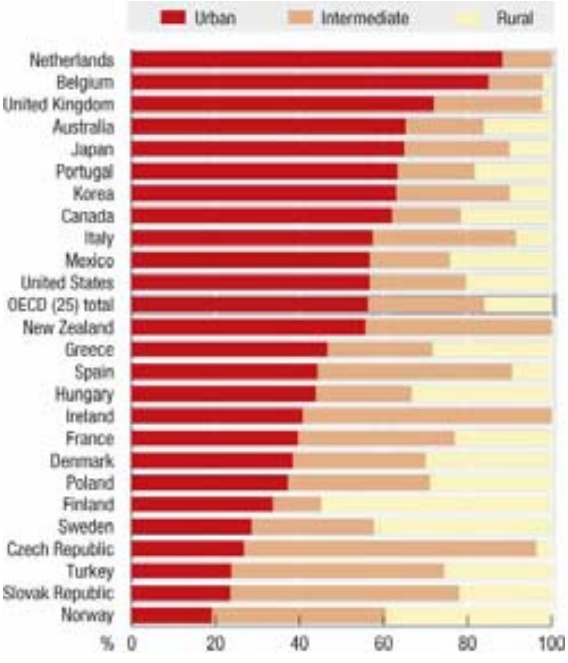
11.3. **The largest regional disparities in tertiary attainments in 2001 occurred in Mexico**

Gini index of inequality of regional tertiary attainment rates, 2001 (TL3)



11.4. **57% of the population with tertiary attainments was concentrated in urban regions in 2001**

Tertiary education attainment rate by regional type, 2001 (TL3)



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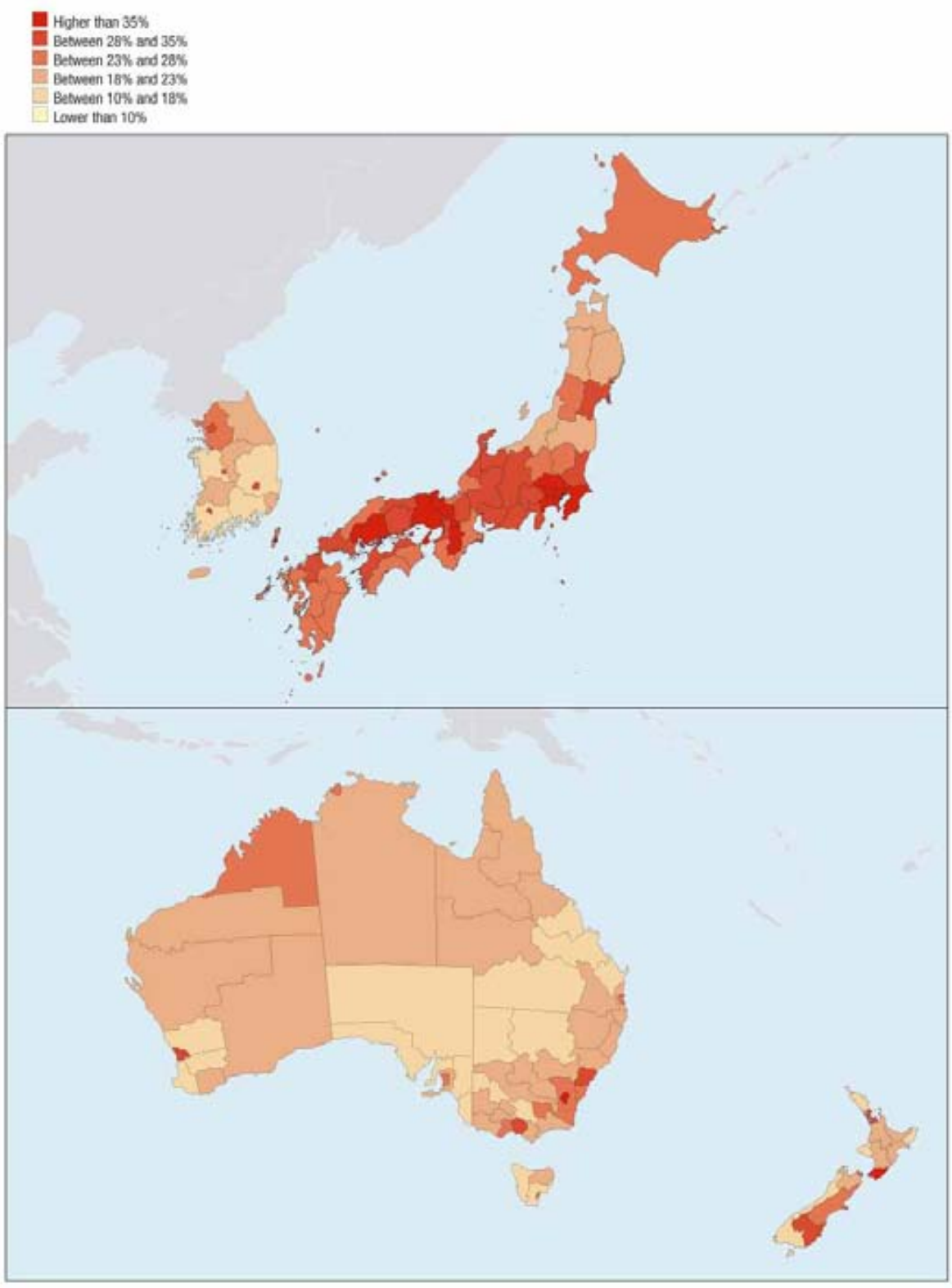
11.5. **Tertiary educational attainment: Asia and Oceania**

As a percentage of the population aged 25-64, 2001



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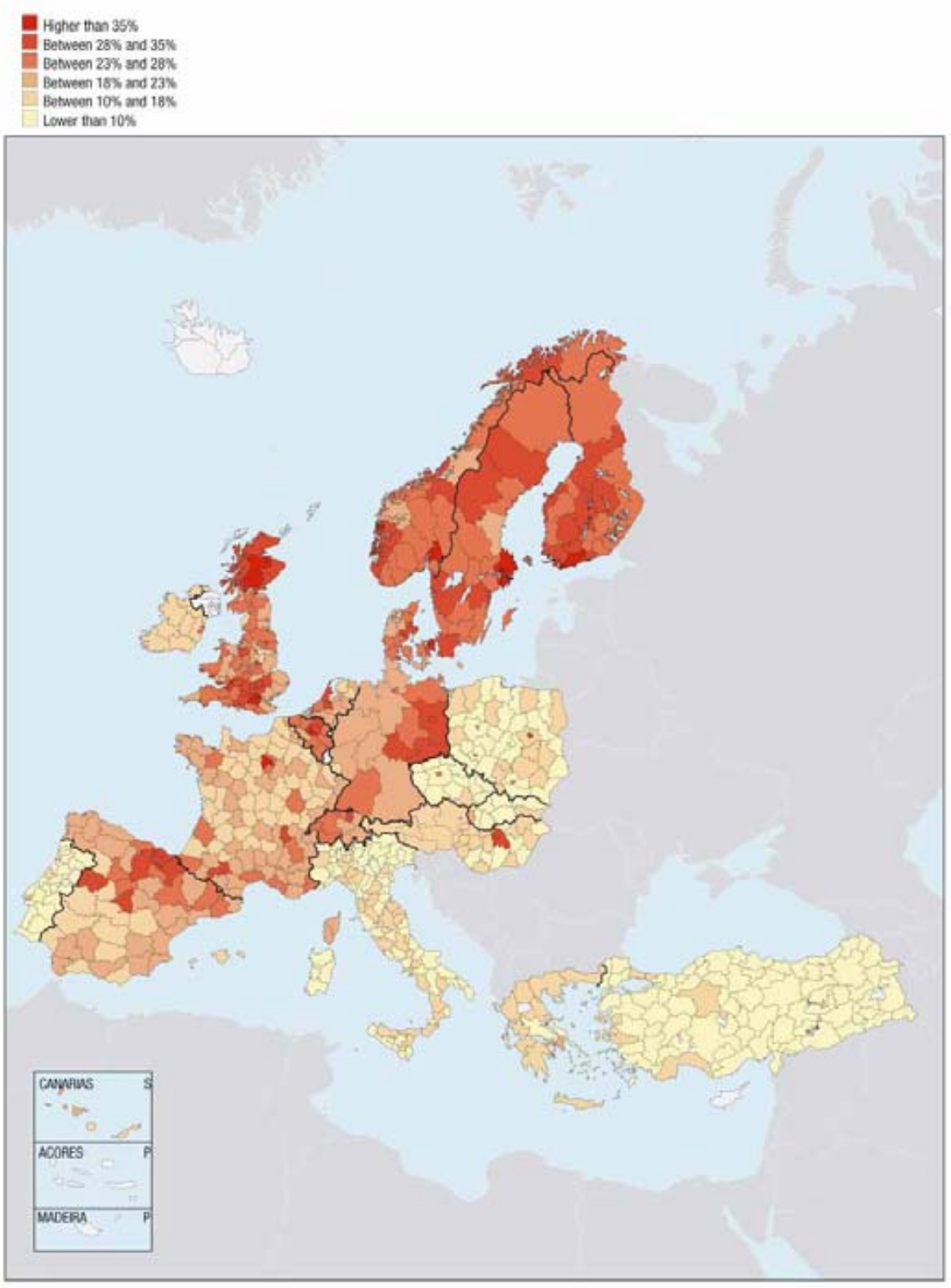
11.6. **Tertiary educational attainment: Europe**

As a percentage of the population aged 25-64, 2001



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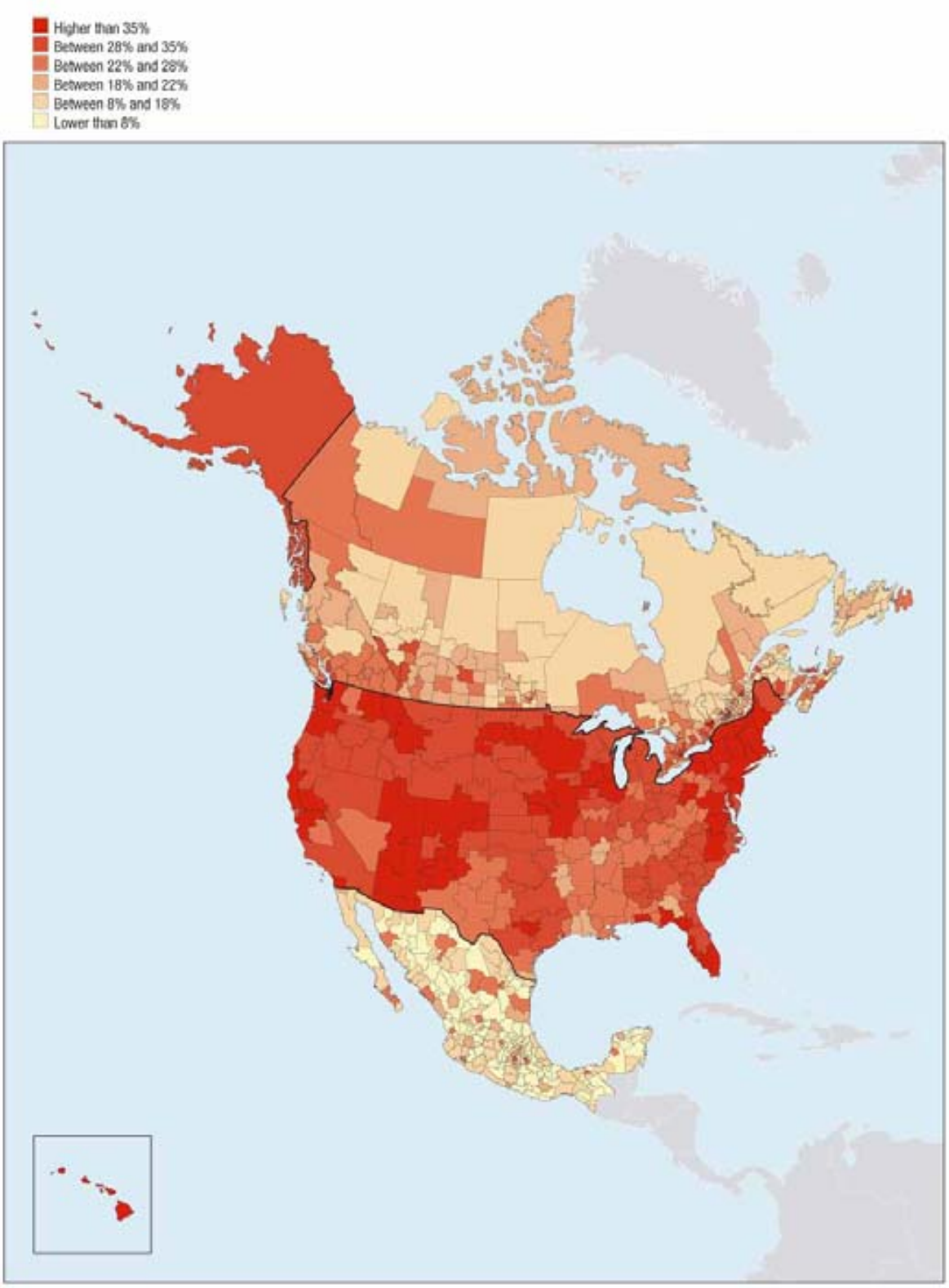
11.7. **Tertiary educational attainment: North America**

As a percentage of the population aged 25-64, 2001



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Participation in tertiary education and tertiary education attainment: what relationship?

A well-educated and well-trained population is central to the social and economic well-being of regions and individuals. Education plays a key role in providing individuals with the knowledge, skills and competencies needed to participate effectively in society. Tertiary educational attainment and participation in tertiary education are indicators respectively of the current and of the future stock of a region's "human capital".

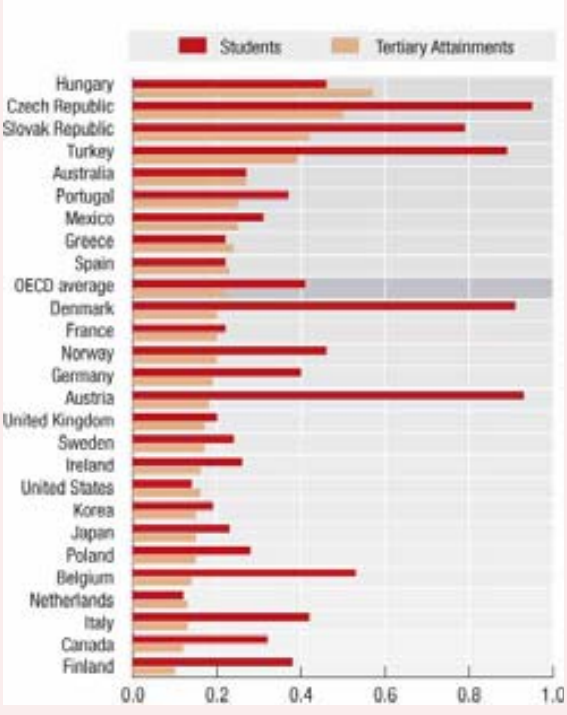
The distribution of the highly skilled population depends mainly on the wage returns to education. People with advanced qualifications have a strong incentive to migrate towards places where people with similar skills are highly concentrated. On the other hand, participation in tertiary education depends on the location of universities. In some countries these tend to be concentrated in a few main cities, while in others they tend to be more decentralised.

In many countries students participating in tertiary education are less evenly distributed than the population with advanced qualifications (Figure 11.8). However, in most countries differences in the coefficient of variation are not large. Only Austria, Belgium, the Czech Republic, Denmark, the Slovak Republic and Turkey display very large differences in variation coefficients. As mentioned, this may indicate that universities are concentrated in a few regions.

In general there seems to be some positive correlation between tertiary attainment and the number of students participating in advanced education (Figure 11.9), suggesting a connection between students in university and the highly skilled labour market. However the correlation is only significant for the Czech Republic, France, Japan, the Netherlands, Poland, Portugal, Sweden, Turkey and the United Kingdom.

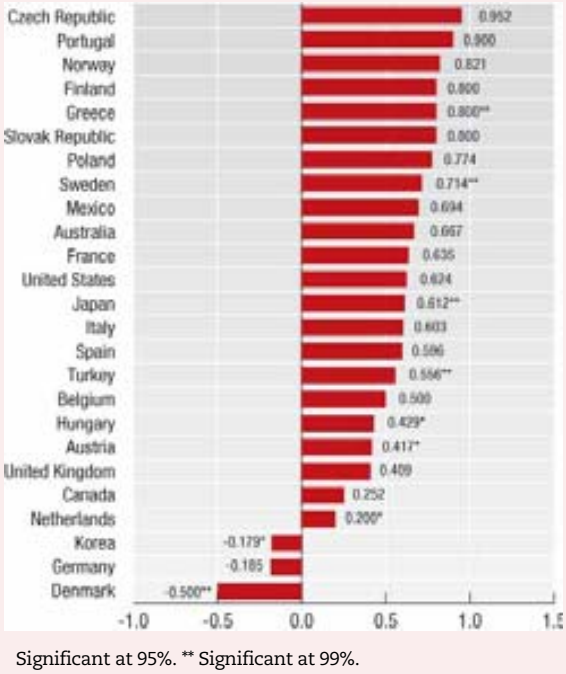
11.8. **Students in tertiary education are less evenly distributed than the population with advanced qualifications**

Coefficient of variation, regional tertiary education attainment and regional student enrolment rate, 2003 (TL2)



11.9. **The correlation between tertiary attainments and students participation in advanced education is positive for most countries**

Spearman correlation between regional tertiary attainment rates and regional enrolment rate in tertiary education, 2003 (TL2)



* Significant at 95%. ** Significant at 99%.

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Symbols and Abbreviations

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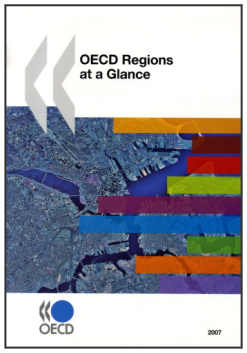

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