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OECD Regions at a Glance

PART II

Making the Best of Local Assets

11. Regional disparities in GDP per capita

GDP per capita varies significantly among OECD countries (Figure 11.1). In 2001, it was more than eight times higher in Luxembourg (USD 49 194)[1] than in Turkey (USD 6 046).

Although substantial, international disparities in GDP per capita are often smaller than differences among regions of the same country. In Turkey, for instance, GDP per capita in the region of Kocaeli is almost 13 times higher than in Hakkari (Figure 11.2). In the United Kingdom, GDP per capita in Inner London – West is more than nine times higher than in the Isle of Anglesey.

These are by no means isolated examples. Significant territorial disparities are also observed in Mexico, Poland, the United States, France, the Slovak Republic, Hungary, Korea, Portugal and Belgium. In all these countries, in 2001 GDP per capita in the "richest" region was at least three times higher than in the "poorest".

In other countries the difference between the most and least prosperous region is smaller. However, with the exception of Australia, the range of variation does not fall below 50% of the national GDP per capita figure.

Part of the observed differences in regional GDP per capita may be due to commuting. By working in one area and living in another, commuters tend to increase GDP per capita in the region where they are employed and decrease GDP per capita in the region where they reside. In several urban regions (*e.g.* Inner London – West, District of Columbia, Paris) GDP per capita appears significantly "oversized" owing to commuting.

The Gini index offers a more precise picture of regional disparities. It looks not only at the regions with the highest and the lowest GDP per capita but also at the differences among all regions. The index ranges between 0 and 1: the higher its value, the larger the regional disparities (Figure 11.3).[2]

In 2001 Turkey (0.32), Mexico (0.27), the Slovak Republic (0.23), Poland (0.21), Belgium (0.19), Korea (0.18), the United Kingdom (0.18) and Hungary (0.17) showed the largest regional inequalities in GDP per capita. In Canada (0.15), Portugal (0.15), Austria (0.15), Italy (0.14) and Germany (0.14), the Gini index was close to the OECD average (0.15). Sweden (0.06), Japan (0.09), Greece (0.09) and the Netherlands (0.10) had the most equal regional distribution of GDP per capita.

To appreciate the economic implications of this pattern, Figure 11.4 shows the percentage of population living in regions where GDP per capita is below the national average. This statistic provides information about the portion of the national population affected by regional disparities in GDP per capita. More than half of the population in OECD countries (59%) resides in region with a level of GDP per capita below the national average. In the Czech Republic (89%), France (80%), Norway (80%), Sweden (79%), the Slovak Republic (79%) and Denmark (78%), a large majority of the population lives in regions with low GDP per capita. In contrast, less than half of the total population resides in regions of low GDP in Australia (29%), Italy (44%), Austria (46%) and the United States (48%).

Definition

GDP per capita is calculated by dividing the GDP of a country or region by the population (number of inhabitants) living there.

1. In 2000 USD PPPs (purchasing power parities). These convert national currencies to a common currency (USD) and eliminate differences in price levels among countries.
2. Regional disparities tend to be underestimated when the size of regions is large. This *may* be the case for Australia, Canada, Mexico and the United States where GDP figures are only available for TL2 regions.

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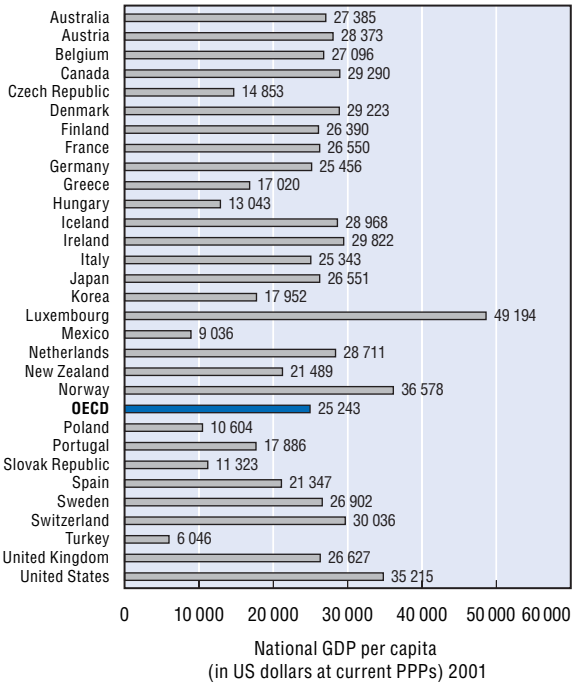
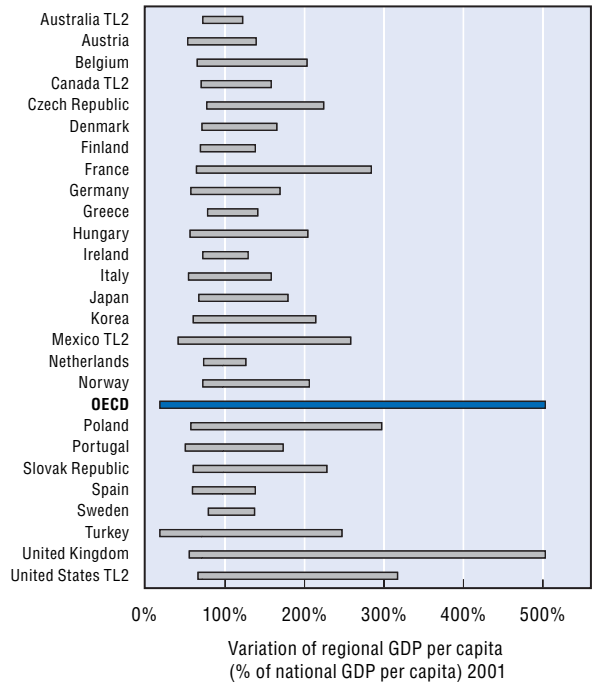
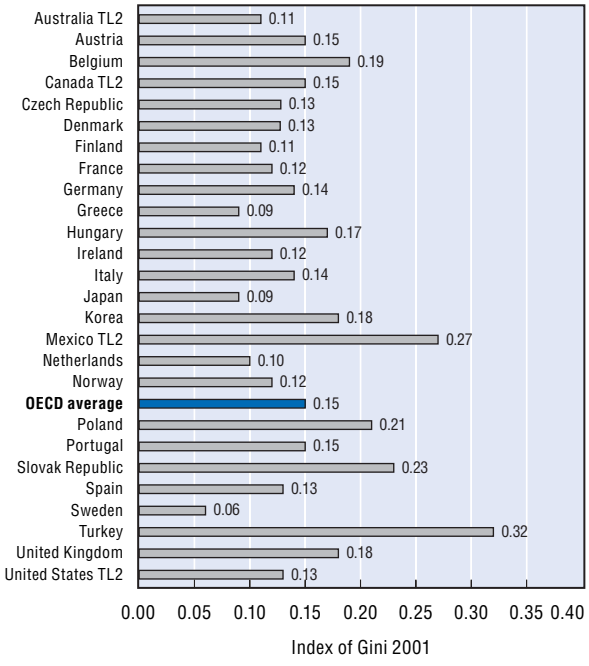
11.1. **GDP per capita is not equally distributed among OECD countries...**



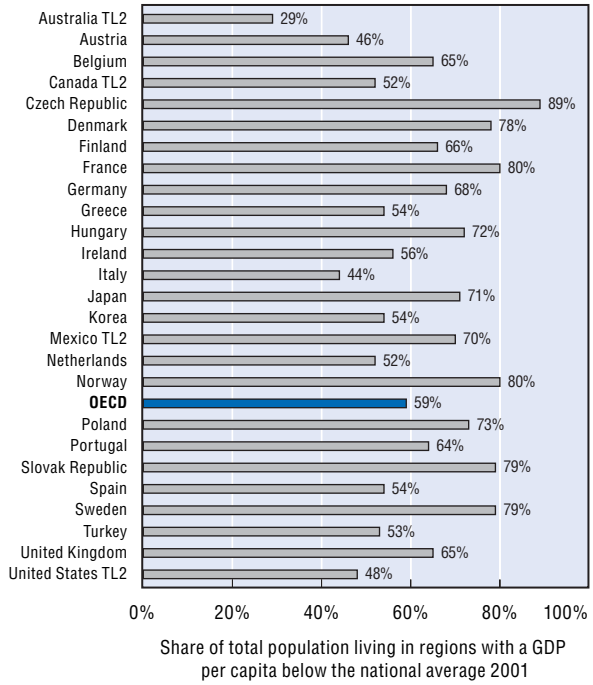
11.2. **... but disparities are even greater among regions within countries**



11.3. **In 2001 Turkey, Mexico and the Slovak Republic displayed the highest values for the Gini index**



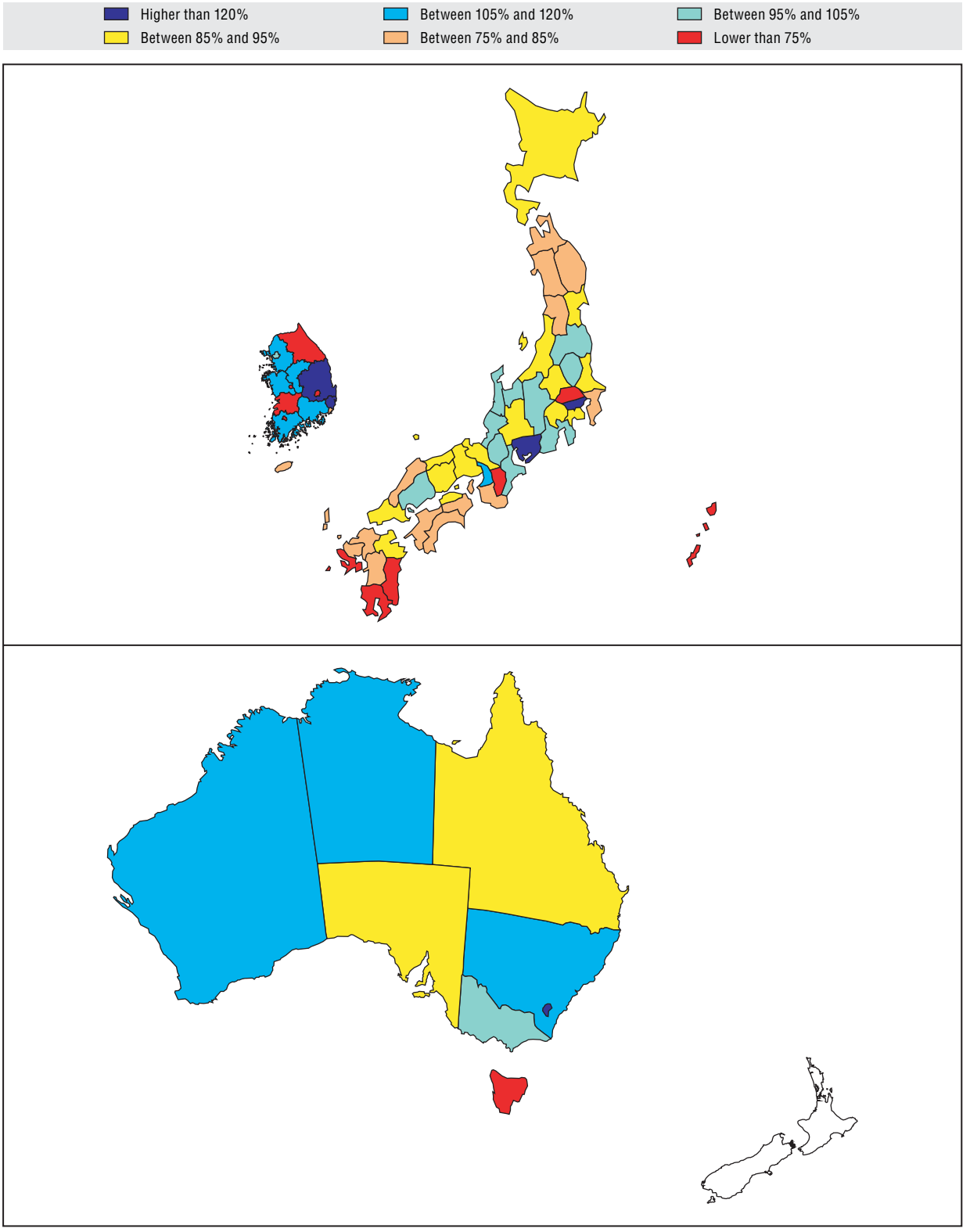
11.4. **59% of the population in OECD countries resides in regions with a GDP per capita below the national average**



Statlink: *http://dx.doi.org/10.1787/524343852388*

11.5. **Regional GDP per capita: Asia TL3 and Oceania TL2**

Percentage of national GDP per capita 2001



Source: OECD Territorial Database.

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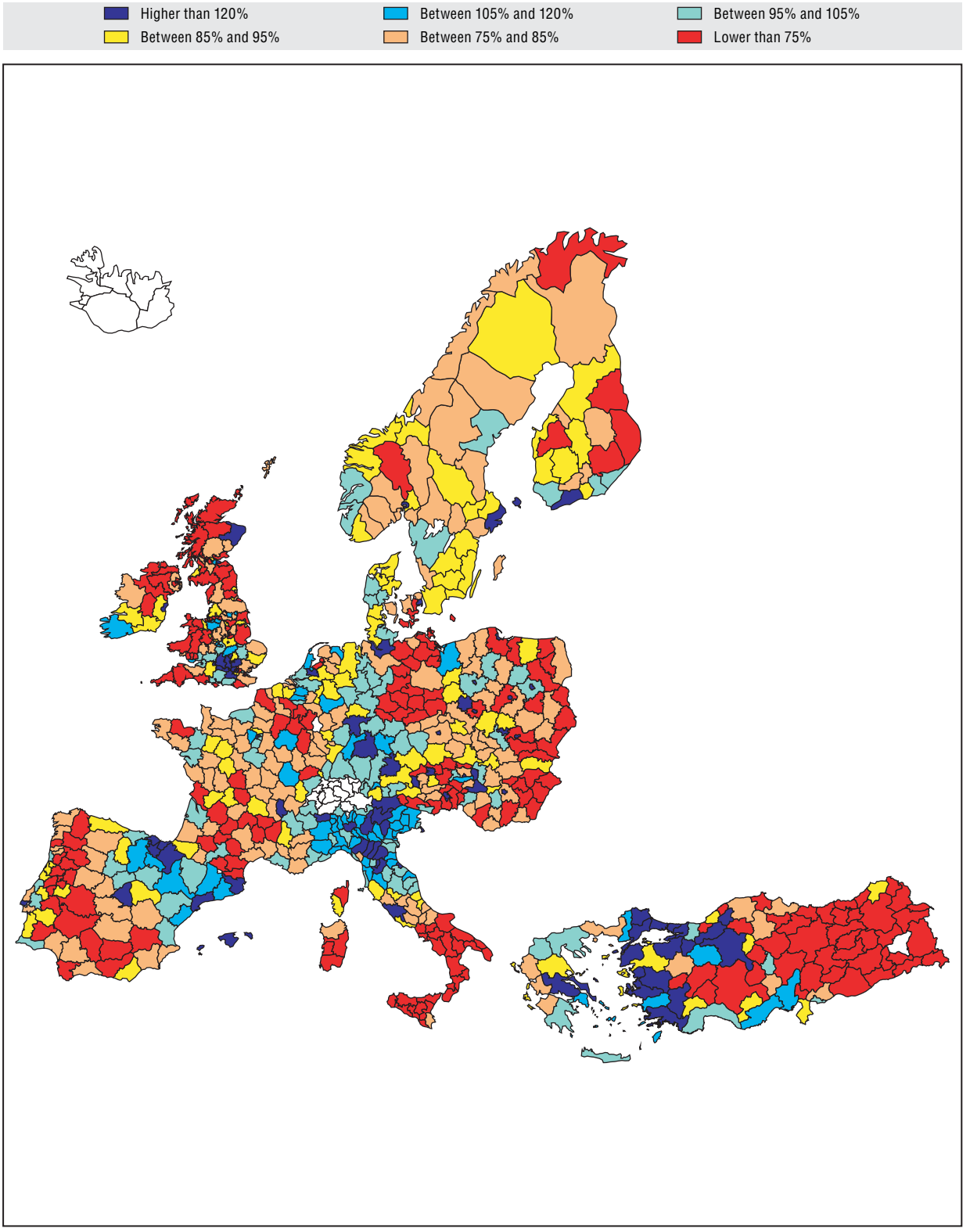
11.6. **Regional GDP per capita: Europe TL3**

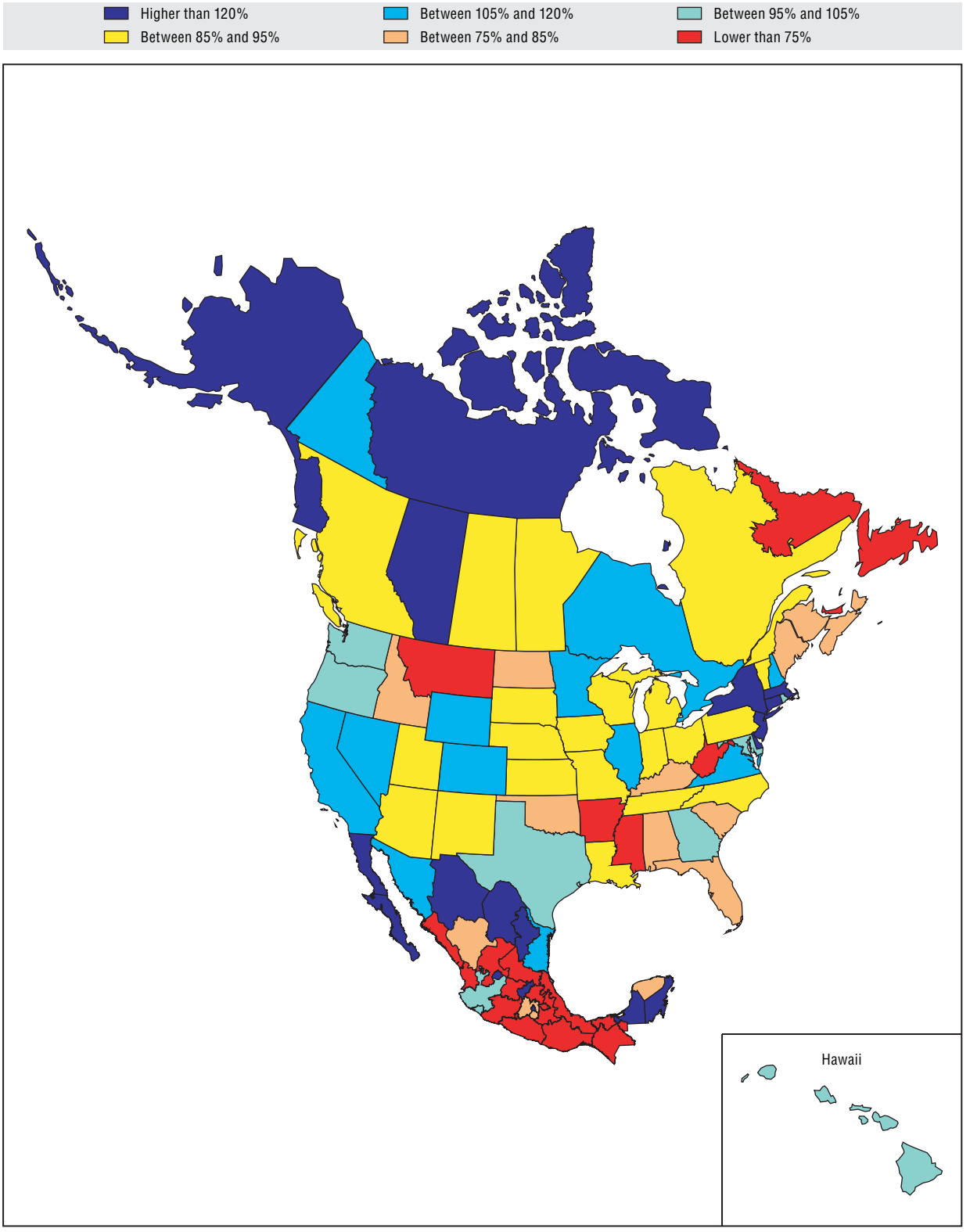
Percentage of national GDP per capita 2001



Source: OECD Territorial Database.

11.7. **Regional GDP per capita: North America TL2**

Percentage of national GDP per capita 2001



Source: OECD Territorial Database.

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GDP per capita: urban dwellers enjoy the most

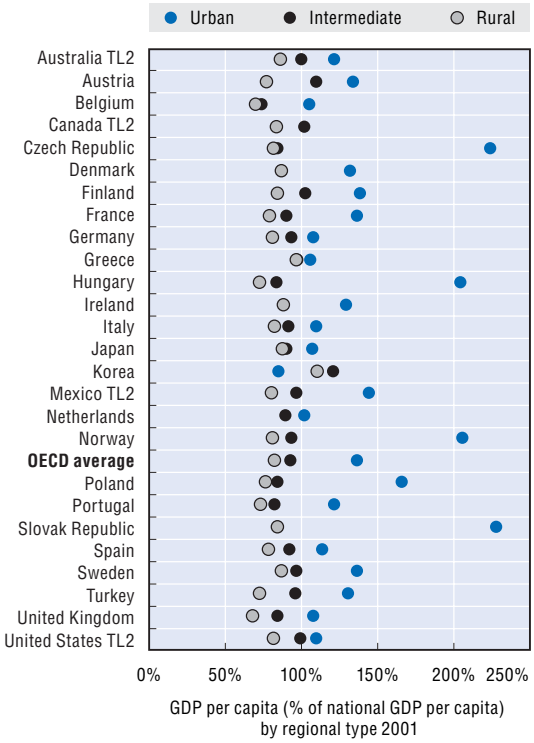
As Figure 11.8 shows, the inhabitants of urban regions enjoy the highest level of GDP per capita. In 2001, GDP per capita in predominantly urban regions in OECD countries was on average 36% higher than the national average. In contrast, intermediate and predominantly rural regions had a GDP per capita that was 93% and 82%, respectively, of the national average.

Urban regions display the highest values for GDP per capita in no less than 24 countries. Only in Canada (which does not have urban regions at Territorial Level 2) and Korea are intermediate regions the most prosperous areas. Rural regions lag behind in 22 out of 25 countries.

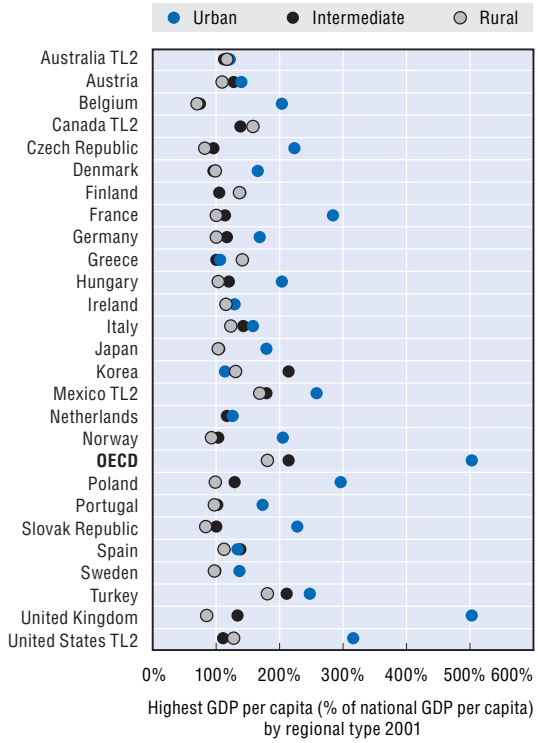
These findings hold even if the focus shifts from the averages to the best performers by regional type (Figure 11.9). Once more the highest GDP per capita is recorded in an urban region in 22 countries, while only in four is the best performer an intermediate or rural region.

The disparities in the levels of GDP per capita among the three regional types might become larger in the future if GDP continues to grow faster in urban regions and population growth (which is already slow) remains divided between intermediate and urban areas (see Chapters 7 and 8). Agglomeration economies are likely to further increase GDP growth and prosperity in urban regions.

11.8. **Urban regions enjoy higher GDP per capita than intermediate and rural regions almost everywhere**



11.9. **An intermediate or rural region recorded the highest GDP per capita in only four countries**



12. Regional disparities in productivity

Productivity is the main factor behind the economic performances of countries and regions. Labour productivity varies significantly among OECD countries. In 2001, GDP per worker[1] in Luxembourg was 44% higher than the OECD average while it was only 37% of the average in Turkey (Figure 12.1).

Such differences are even larger among regions (Figure 12.2). In the United States, for instance, GDP per worker was 2.5 times higher than the national average in the District of Columbia and only a half of the national average in Montana. In Turkey, labour productivity in the region of Mus was 25% of the national GDP per worker but almost 2.5 times higher than the national average in the region of Kocaeli.

A similar pattern is apparent in most countries, in particular Mexico, Korea and, to a lesser extent, Canada, France, the Czech Republic, Poland and the United Kingdom. Denmark, Finland, the Netherlands and Norway show a narrower regional range between highest and lowest GDP per worker.

The Gini index offers a more precise picture of regional disparities. It looks not only at the regions with the highest and the lowest GDP per worker but also at the differences among all regions. The index ranges between 0 and 1: the higher its value, the larger the regional disparities.

Turkey, Mexico and the United States show the largest regional disparities in labour productivity, with a Gini index equal to 0.26, 0.23 and 0.20, respectively (Figure 12.3). Regional disparities are also above the OECD average (0.11) in Poland (0.18), Korea (0.17), Canada (0.13), Greece and Austria (0.12).

Sweden (0.04), the Netherlands and Denmark (0.05) appear to be the OECD countries with the smallest disparities in labour productivity.

To appreciate the economic implications of this pattern, Figure 12.4 shows the percentage of workers employed in regions where productivity is below the national average. This statistic provides information about the share of the national workforce that is affected by regional disparities in productivity. In 2001, more than 60% of OECD workers worked in regions with productivity below the national average.

The percentage was particularly high in the Czech Republic and Greece (85%), the Slovak Republic (73%) and Sweden (70%). In Australia, Austria, Ireland and Italy, instead, less than half of the workforce is employed in regions with low productivity.

Definition

Average labour productivity is defined as the ratio between GDP and employment, where the latter is measured at the place of work.

1. At 2000 USD PPPs (purchasing power parities). PPPs convert national currencies to a common currency (USD) and eliminate differences in price levels among countries.

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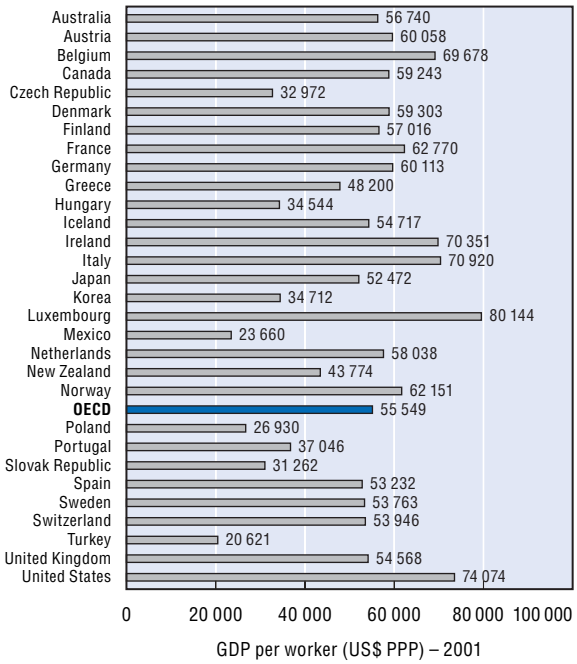
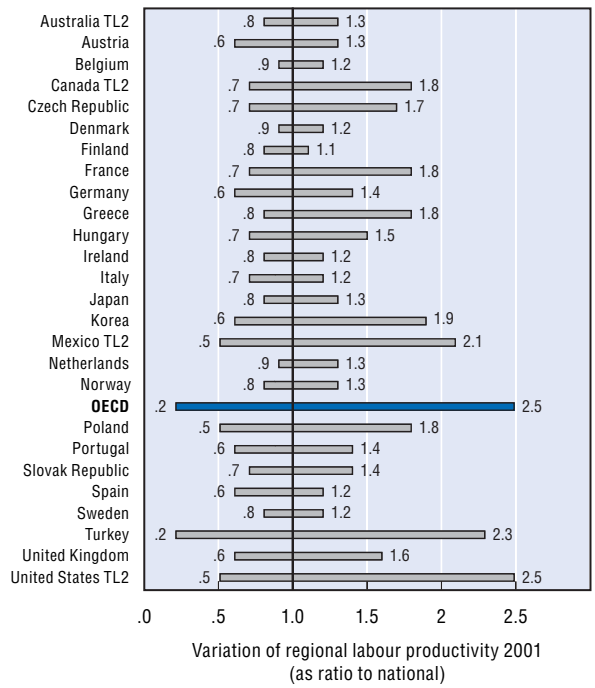
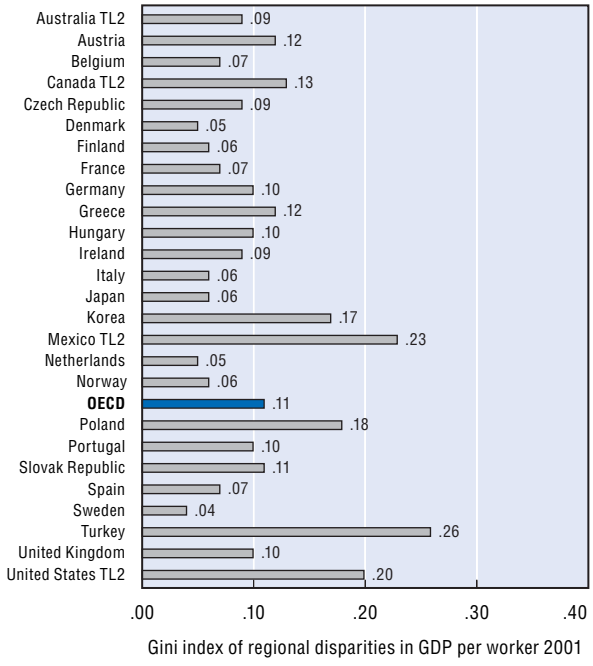
12.1. **Labour productivity varies significantly among OECD countries...**



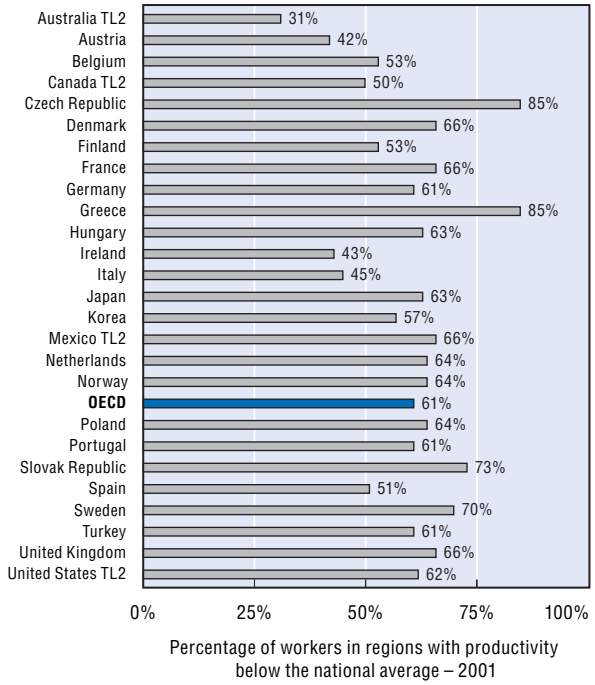
12.2. **... but disparities in productivity are even larger among regions**



12.3. **In 2001, Mexico, Turkey and the United States showed the largest regional disparities in labour productivity**



12.4. **On average, 61% of workers are employed in regions of low productivity**



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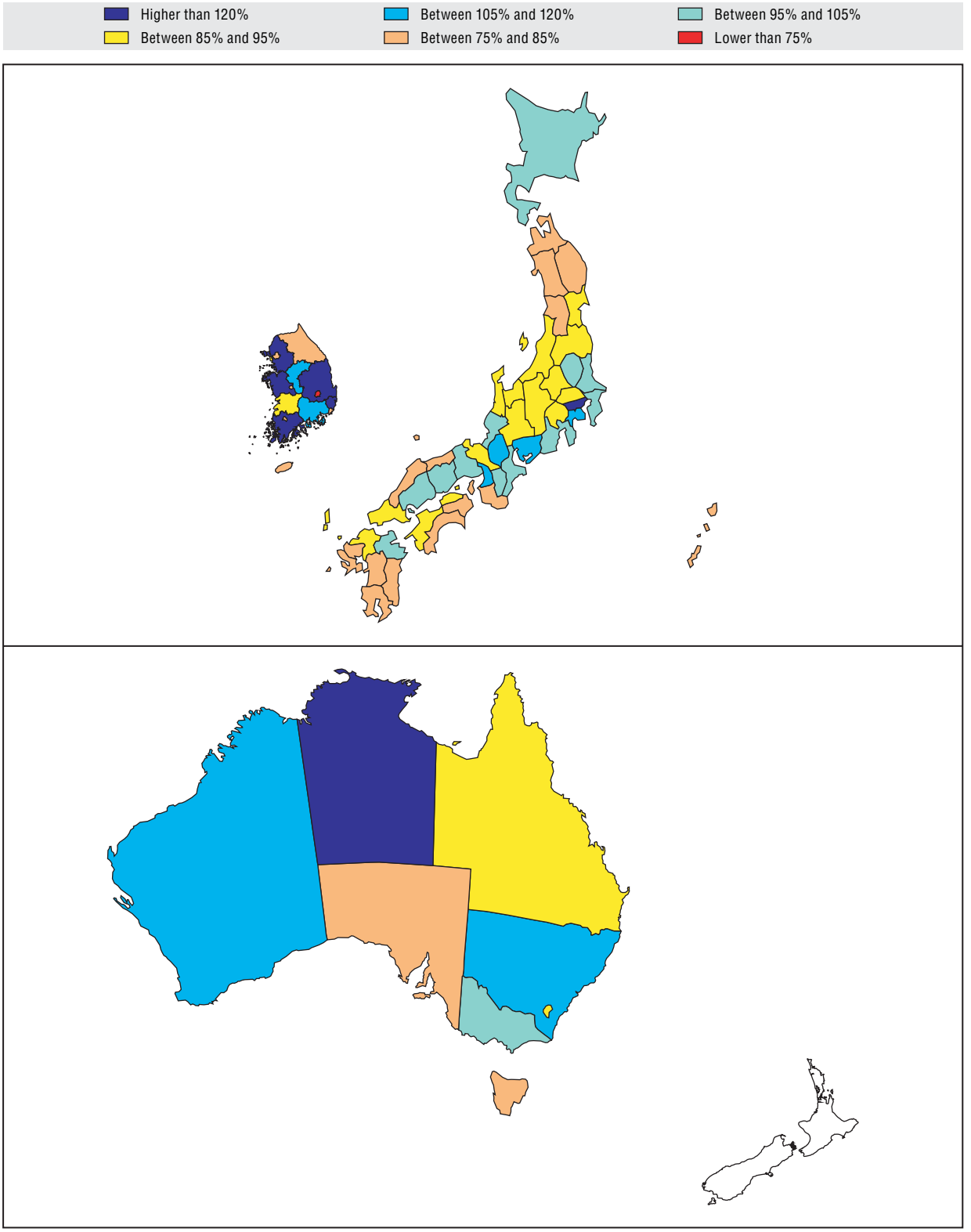
12.5. **Regional productivity: Asia TL3 and Oceania TL2**

Percentage of national productivity (GDP per worker) 2001



Source: OECD Territorial Database.

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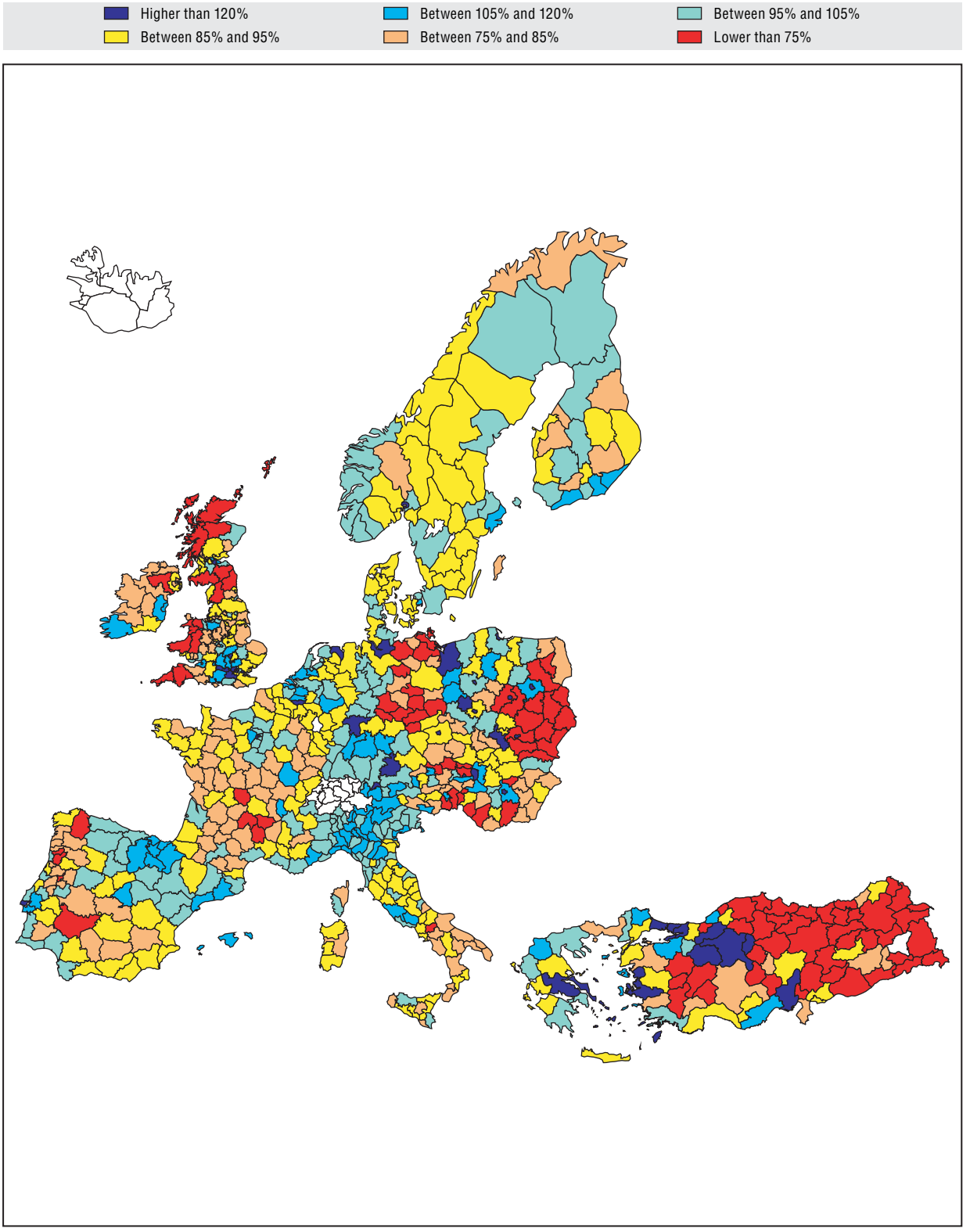
12.6. **Regional productivity: Europe TL3**

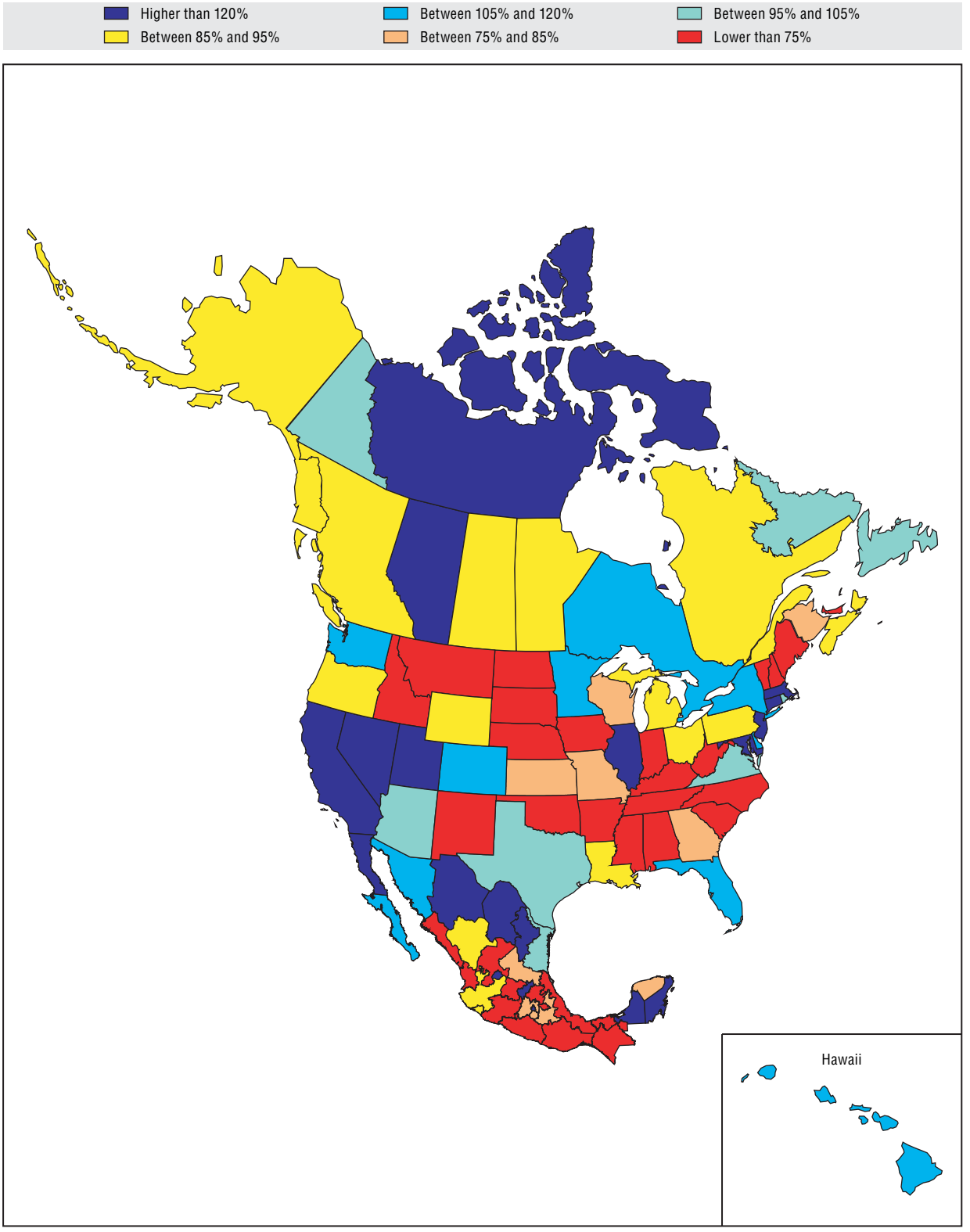
Percentage of national productivity (GDP per worker) 2001



Source: OECD Territorial Database.

12.7. **Regional productivity: North America TL2**

Percentage of national productivity (GDP per worker) 2001



Source: OECD Territorial Database.

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Regional productivity: better skills or more infrastructure?

In a large majority of OECD countries, productivity tends to be higher in regions with a high concentration of economic activity. As Figure 12.8 reveals, 21 out of 26 countries show a positive correlation between GDP per worker and the employment density, *i.e.* the ratio between employment and regional area, and the correlation is statistically significant in 17 of these countries.

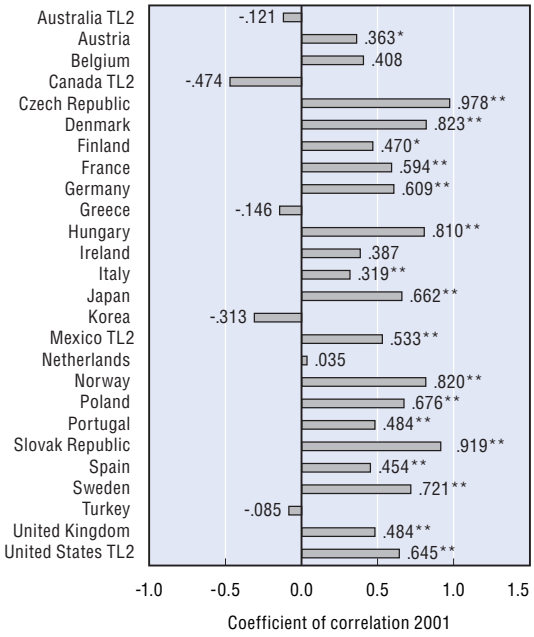
This finding might be regarded as an evidence of some economies of agglomeration, *i.e.* that spatial concentration of economic activity results in higher productivity. There are at least three reasons why one might expect this. First, concentration of firms in the same place would allow a pooled labour market for skilled workers and facilitate the match between demand and supply of skills. Second, concentration permits a greater variety of non-traded inputs at a lower cost. Finally, proximity of economic agents (firms, consumers and workers) facilitates information flows and generates positive knowledge spillovers.

An alternative explanation is that regions with a higher concentration of economic activity tend to have higher endowments in infrastructure. According to this hypothesis, higher productivity would not stem from agglomeration economies but from the higher stock of capital per worker.

Figure 12.9 illustrates one way to assess the importance of these two explanations, by showing the correlation between productivity and employment density but controlling for the share of the highly educated population (with a university degree or higher). If the correlation between productivity and employment density is not confirmed, one could argue that high productivity is due to agglomeration economies, *i.e.* the concentration of skilled individuals. On the contrary, the persistence of a positive correlation would indicate that high productivity is the result of a larger stock of infrastructure.

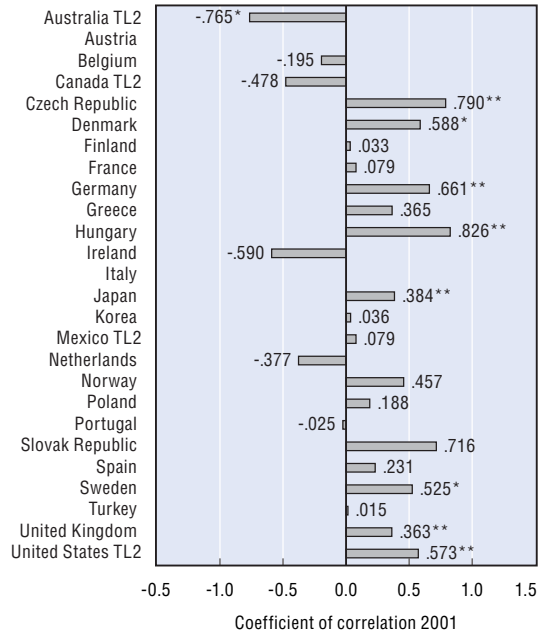
A positive and significant correlation is confirmed in eight out of 15 countries (the Czech Republic, Denmark, Germany, Hungary, Japan, Sweden, the United Kingdom and the United States). The correlation is still positive although not significant in Norway, Poland, the Slovak Republic and Spain. In this group of countries, therefore, higher regional productivity seems mainly explained by a higher level of infrastructure. In other countries, the correlation tends to disappear (Finland, France and Mexico) or becomes negative (Belgium, Ireland, Korea, Netherlands, and Portugal), suggesting that high regional productivity in this group of countries is mainly due to concentration of skills.

12.8. **In most countries, productivity is high in regions with high employment density...**



* Indicates significant at 95%.
** Indicates significant at 99%.

12.9. **... but skills concentration explains high productivity only in some**



* Indicates significant at 95%.
** Indicates significant at 99%.

13. Regional disparities in unemployment rates

Unemployment rates vary significantly among OECD countries. In 2001, international differences in unemployment rates were as large as 17 percentage points, ranging from 1.7% in Luxembourg to 19.2% in the Slovak Republic (Figure 13.1).

Significant international differences in unemployment rates hide even larger differences among regions. In Canada, Italy, Poland and Spain, differences in regional unemployment rates were over 20 percentage points (Figure 13.2). In Belgium, the Czech Republic, Finland, France, Germany, Greece, Hungary, the Slovak Republic, Turkey, the United Kingdom and the United States, these differences were smaller but still large (above 10 percentage points). Only in Iceland, Ireland, Mexico, the Netherlands and Switzerland, did unemployment rates reflect a more even regional pattern.

The Gini index offers a more precise picture of regional disparities. It looks not only at the regions with the highest and the lowest unemployment rates but also at the differences among regions. The index ranges between 0 and 1: the higher its value, the larger the regional disparities.

In 2001, Italy was the country with the largest disparity in unemployment rates; the Gini index was 0.42 (Figure 13.3). Regional disparities were also large in Canada (0.32), Belgium (0.31), Germany (0.28), Hungary (0.28) and the United Kingdom (0.27). In most other countries, regional disparities were close to the OECD average (0.19). Japan was the country with the lowest disparity in the unemployment rate (0.11).

To appreciate the economic implication of this pattern, Figure 13.4 shows the percentages of the labour force located in regions where unemployment rates are above the national average. This statistic provides information about the share of the national workforce that is affected by regional disparities in unemployment rates. In 2001, more than 40% of the OECD labour force was based in regions with unemployment rates above the national rate.

The percentage was particularly high in Greece (73%) and New Zealand (63%). In Denmark, Finland, Poland, Portugal, the Slovak Republic and Switzerland, the percentage of the labour force in regions of high unemployment was significantly above the OECD average. Canada and the Netherlands appear to be the countries where the largest majority of the labour force is based in regions of low unemployment (73% and 74%, respectively).

Definition

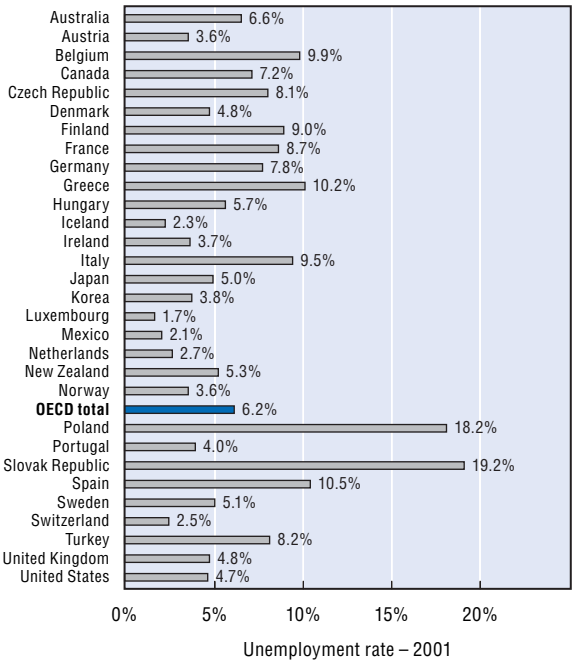
Unemployment rate is computed as the ratio of unemployment and labour force, where the latter is defined as the sum of employed and unemployed persons.

Unemployed persons comprise persons who were (all three conditions must be fulfilled simultaneously):

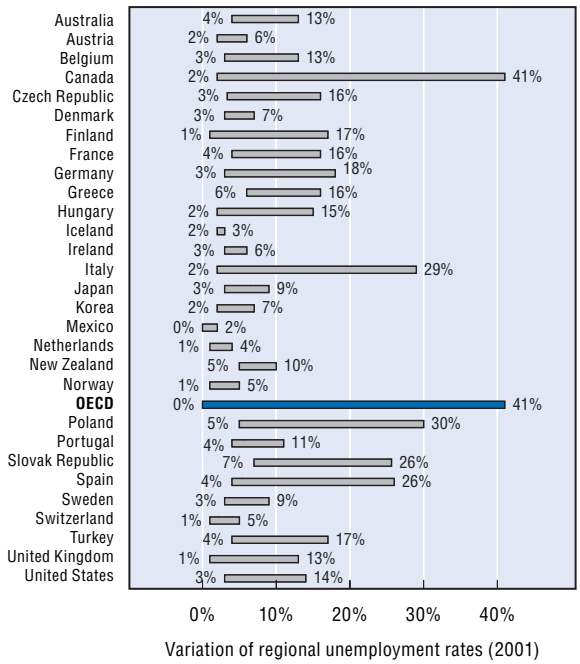
1. without work during the reference week;
2. available for work at the time (*i.e.* were available for paid employment or self-employment before the end of the two weeks following the reference week);
3. actively seeking work (*i.e.* had taken specific steps in the four-week period ending with the reference week to seek paid employment or self-employment).

Employed persons are all persons who during the reference week worked at least one hour for pay or profit, or were temporarily absent from such work. Family workers are included.

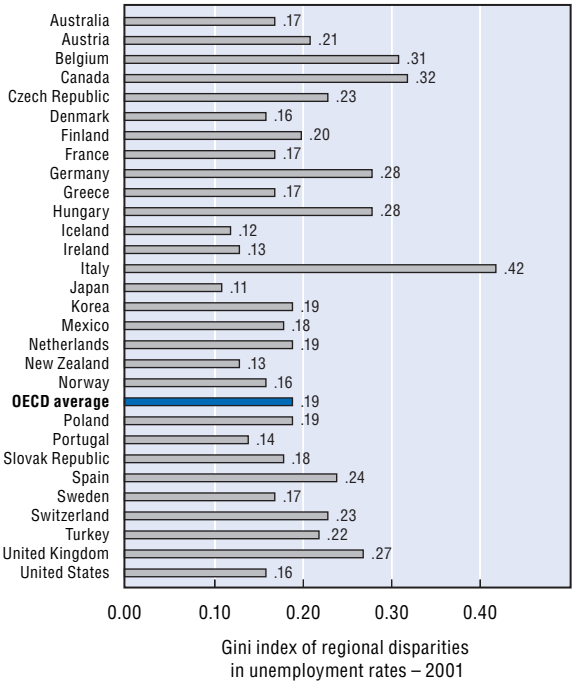
13.1. **Unemployment rates vary significantly among OECD countries...**



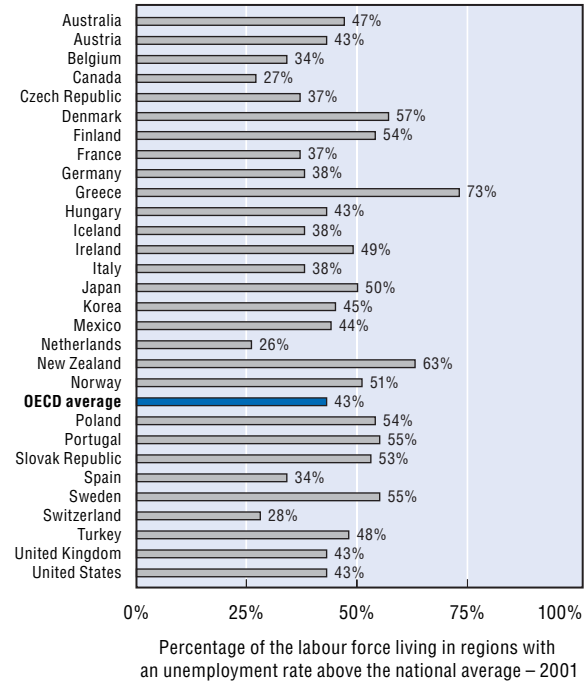
13.2. **... but disparities in unemployment rates are even larger among regions**



13.3. **In 2001, Italy, Belgium and Canada showed the largest regional disparities in unemployment rates**



13.4. **In 2001, one-third of the OECD labour force lived in regions with high unemployment rates**



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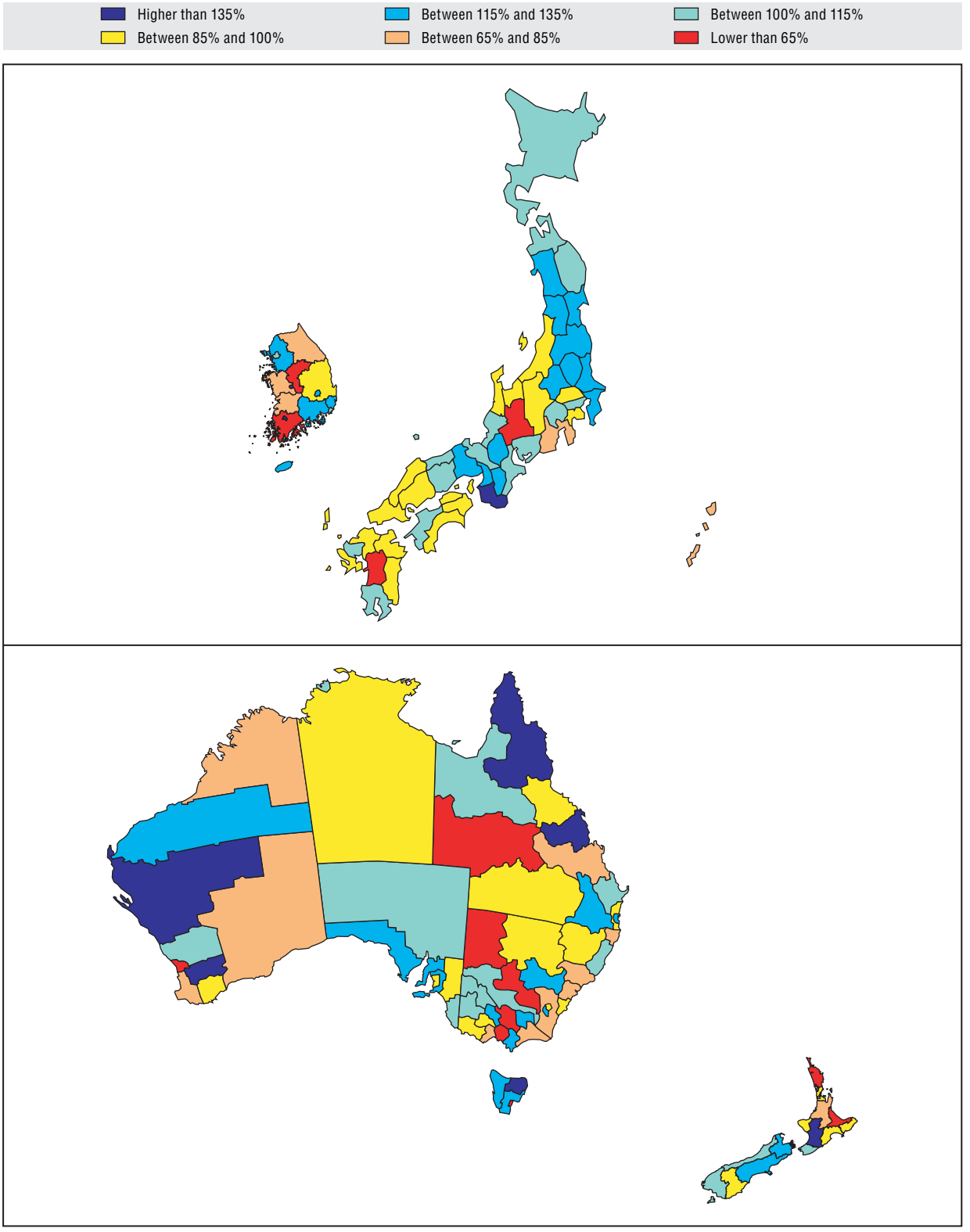
13.5. **Regional unemployment rate: Asia and Oceania TL3**

Percentage of national unemployment rate 2001



Source: OECD Territorial Database.

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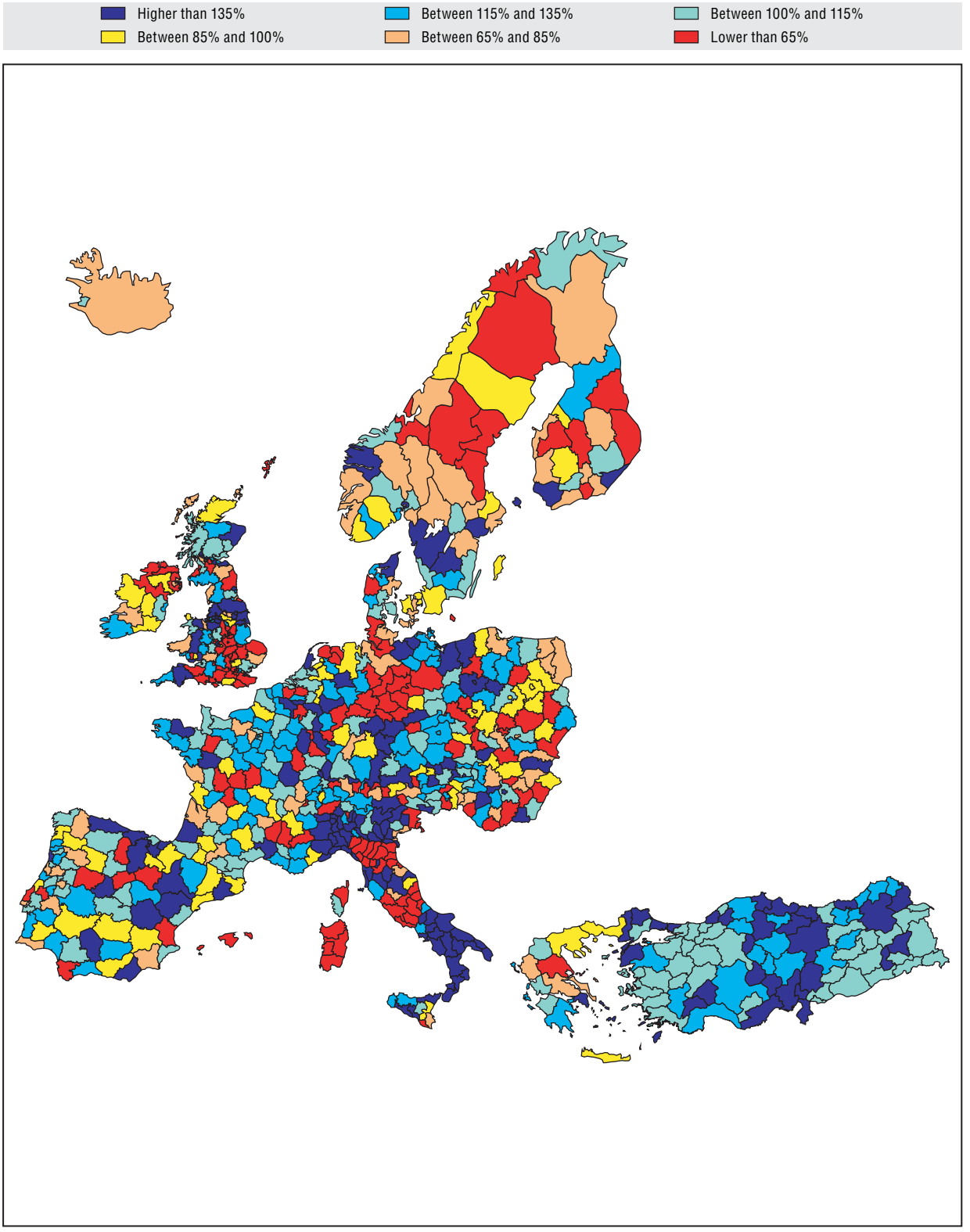
13.6. **Regional unemployment rate: Europe TL3**

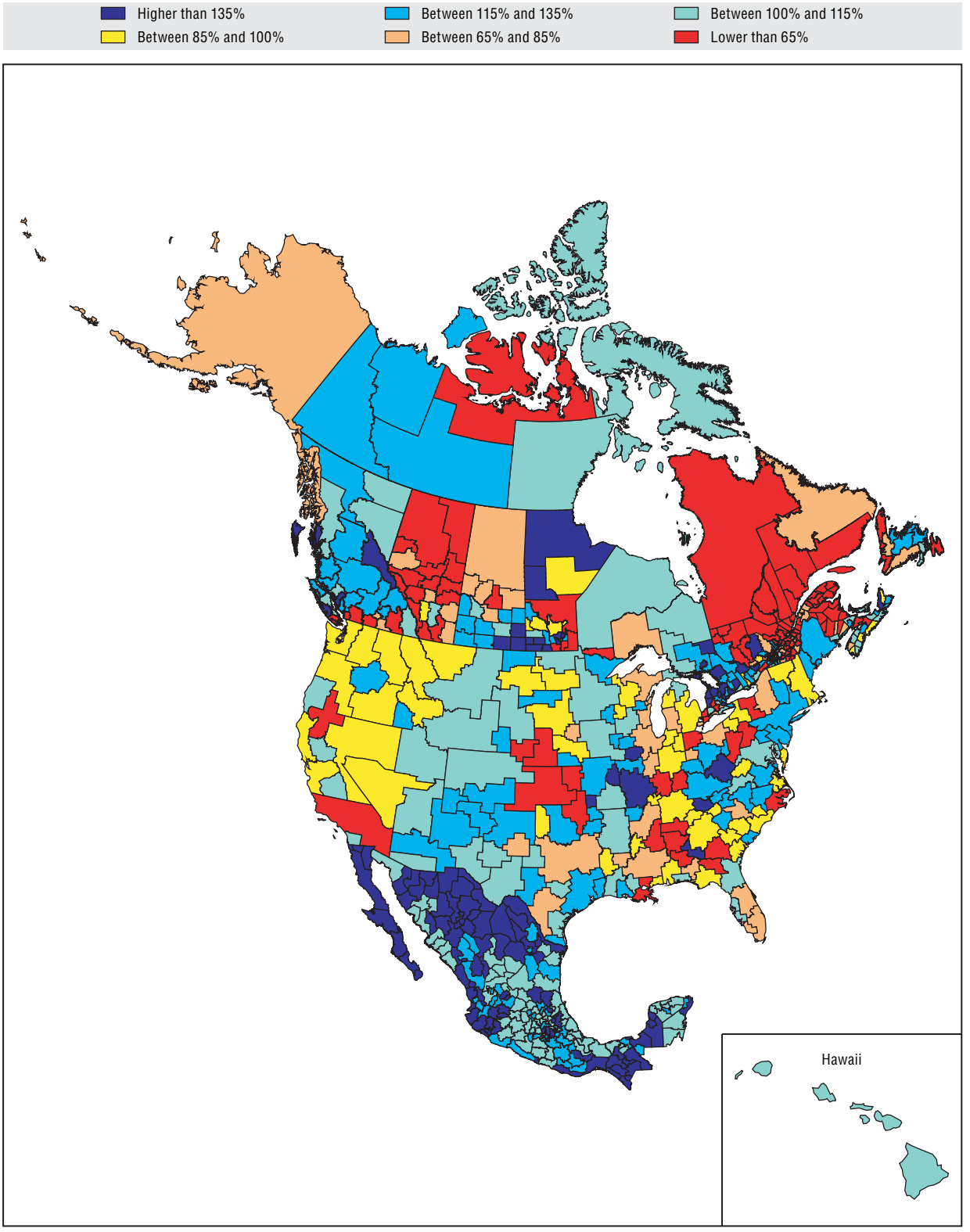
Percentage of national unemployment rate 2001



Source: OECD Territorial Database.

13.7. **Regional unemployment rate: North America TL3**

Percentage of national unemployment rate 2001



Source: OECD Territorial Database.

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Regional unemployment: market failure or wage inflexibility?

Unemployment rates vary significantly among sub-national regions, and, in many countries, regional disparities have persisted over a long period of time. Persistent disparities in unemployment should provide individuals with the incentive to move from regions with high unemployment to regions with low unemployment in order to exploit higher job opportunities. Mobility, however, is not without cost, and even if in the long run the return to moving to another region would exceed the costs, imperfect capital markets, risk aversion or social ties could make mobility insufficient to reabsorb unemployment.

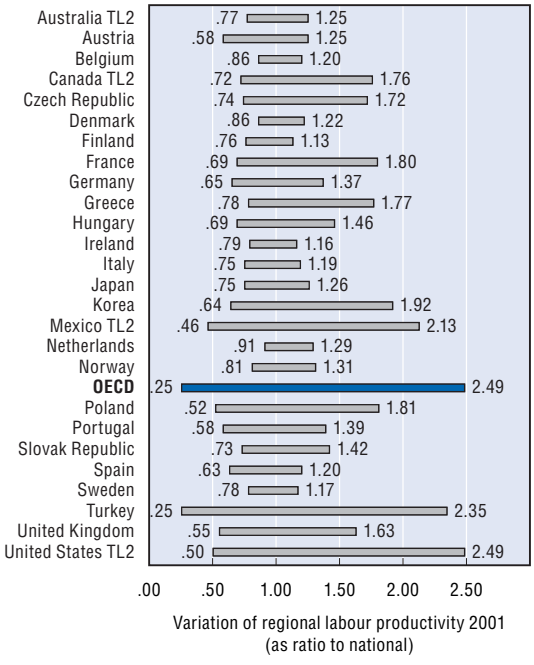
If some "market failure" prevents adjustment *between regions*, wage flexibility should ensure labour market clearing *within regions*. For as long as wages are set according to marginal labour productivity, the demand for labour will always adjust to the supply. This is why wage inflexibility is often considered the main cause for regional disparities in unemployment rates. For instance, if wages are set at the national level, regional differences in productivity (Figure 13.8) would necessarily be translated into higher unemployment rates in regions with low productivity.

Figure 13.9 shows the correlation coefficients between unemployment rates and productivity in each country. A negative coefficient – indicating that unemployment is high in regions with low productivity – would be consistent with the hypothesis that wage inflexibility is a significant explanation for regional disparities. In 18 out of 26 countries, the correlation is negative; in 6 of these 18 countries (Germany, Hungary, Italy, Poland, the Slovak Republic and Spain) the coefficient is also statistically significant (at 95% confidence). In the remaining 8 countries, the correlation is positive, although it is significant only for the United States.

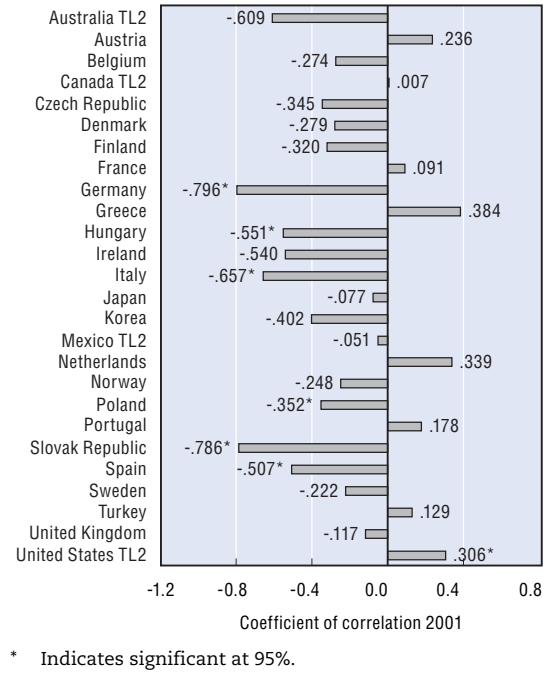
These results should be interpreted with caution for at least two reasons. First, there are considerable differences in price levels among regions but, owing to lack of data, regional productivity is measured at national prices. Second, economic theory predicts a relationship between marginal productivity and wages whereas the correlation is based on average productivity.

Notwithstanding these caveats, the observed patterns of regional unemployment do not seem inconsistent with the hypothesis that unemployment disparities are a result of wage inflexibility.

13.8. **There are significant differences in labour productivity among regions**



13.9. **In several countries, low-productivity regions tend to have higher unemployment rates**



* Indicates significant at 95%.

14. Regional disparities in participation rates

Labour force participation varies significantly among OECD countries. In 2001, international differences in participation rates were as large as 35 percentage points, ranging from 87% in Iceland to 52% in Turkey (Figure 14.1).

Significant international differences in participation rates hide even larger differences among regions. In Germany and Poland, differences in regional participation rates were above 50 percentage points (Figure 14.2). In Canada, Denmark, Mexico, Turkey and the United States, they were no smaller than 30 percentage points. Only in Belgium, the Czech Republic, Ireland, the Netherlands, Norway and Sweden were regional differences in participation rates smaller than 10 percentage points.

The Gini index offers a more precise picture of regional disparities. It looks not only at the regions with the highest and the lowest participation rates but also at the differences among regions. The index ranges between 0 and 1: the higher its value, the larger the regional disparities.

In 2001, Spain and Poland had the largest disparities in participation rates, with a Gini index of 0.17 and 0.09, respectively (Figure 14.3). In the other countries, regional disparities in participation rates were much smaller than disparities in GDP per capita and unemployment, as the OECD average Gini index was 0.04.

To appreciate the economic implications of this pattern, Figure 14.4 shows the percentage of the working-age population (15-64 years old) living in regions where participation rates are below the national average. This statistic provides information about the share of the working-age population that tends to have a low level of participation in the labour market. In 2001, almost half (48%) of the OECD working-age population was located in regions with a participation rate below the national rate.

This percentage was particularly high in Korea (76%), Japan (73%) and Turkey (70%). In Belgium, the Czech Republic, Sweden and the United Kingdom, the percentage of the working-age population in regions with low participation was significantly above the OECD average. In Canada, Greece, the Netherlands and Portugal a large majority of the working-age population is based in regions with high participation rates.

Definition

The participation rate is defined as the ratio of the labour force to the population aged 15-64 years. The labour force is defined as the sum of employed and unemployed persons.

Unemployed persons comprise persons who were (all three conditions must be fulfilled simultaneously):

1. without work during the reference week;
2. available for work at the time (*i.e.* were available for paid employment or self-employment before the end of the two weeks following the reference week);
3. actively seeking work (*i.e.* had taken specific steps in the four-week period ending with the reference week to seek paid employment or self-employment).

Employed persons are all persons who during the reference week worked at least one hour for pay or profit, or were temporarily absent from such work. Family workers are included.

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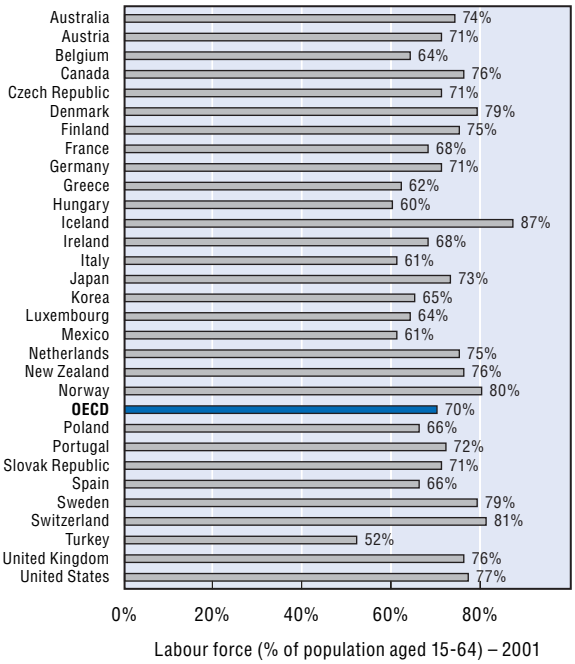
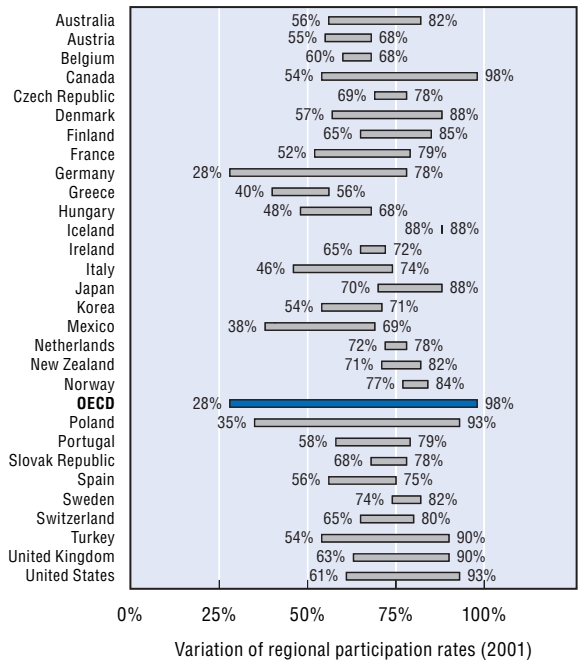
14.1. **Participation rates vary significantly among OECD countries...**



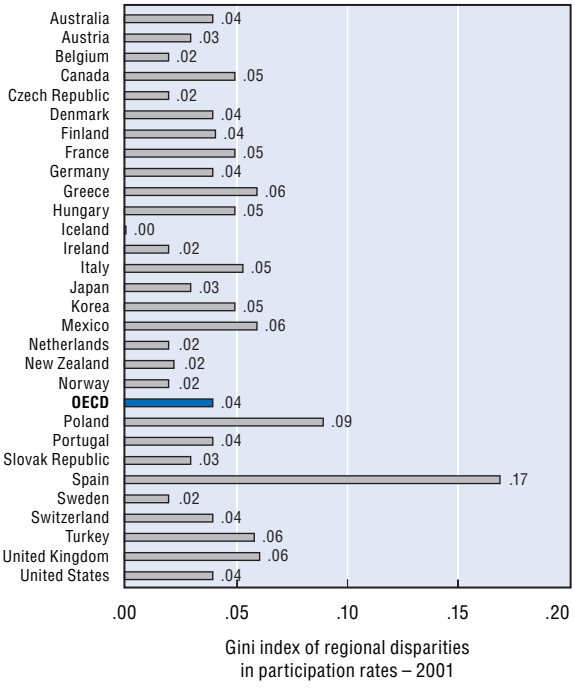
Labour force (% of population aged 15-64) – 2001

14.2. **... but disparities in participation rates are even larger among regions**



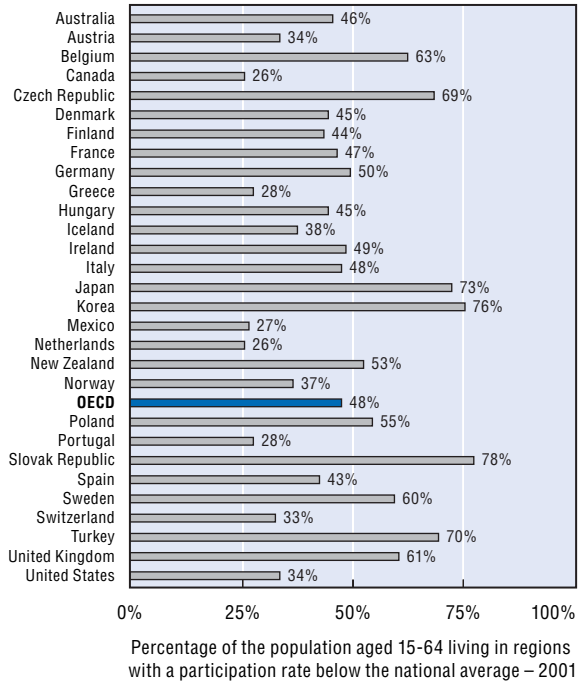
Variation of regional participation rates (2001)

14.3. **In 2001, Spain showed the largest regional disparities in participation rates**



Gini index of regional disparities in participation rates – 2001

14.4. **In 2001, about half of the OECD working-age population lived in regions with low participation rates**

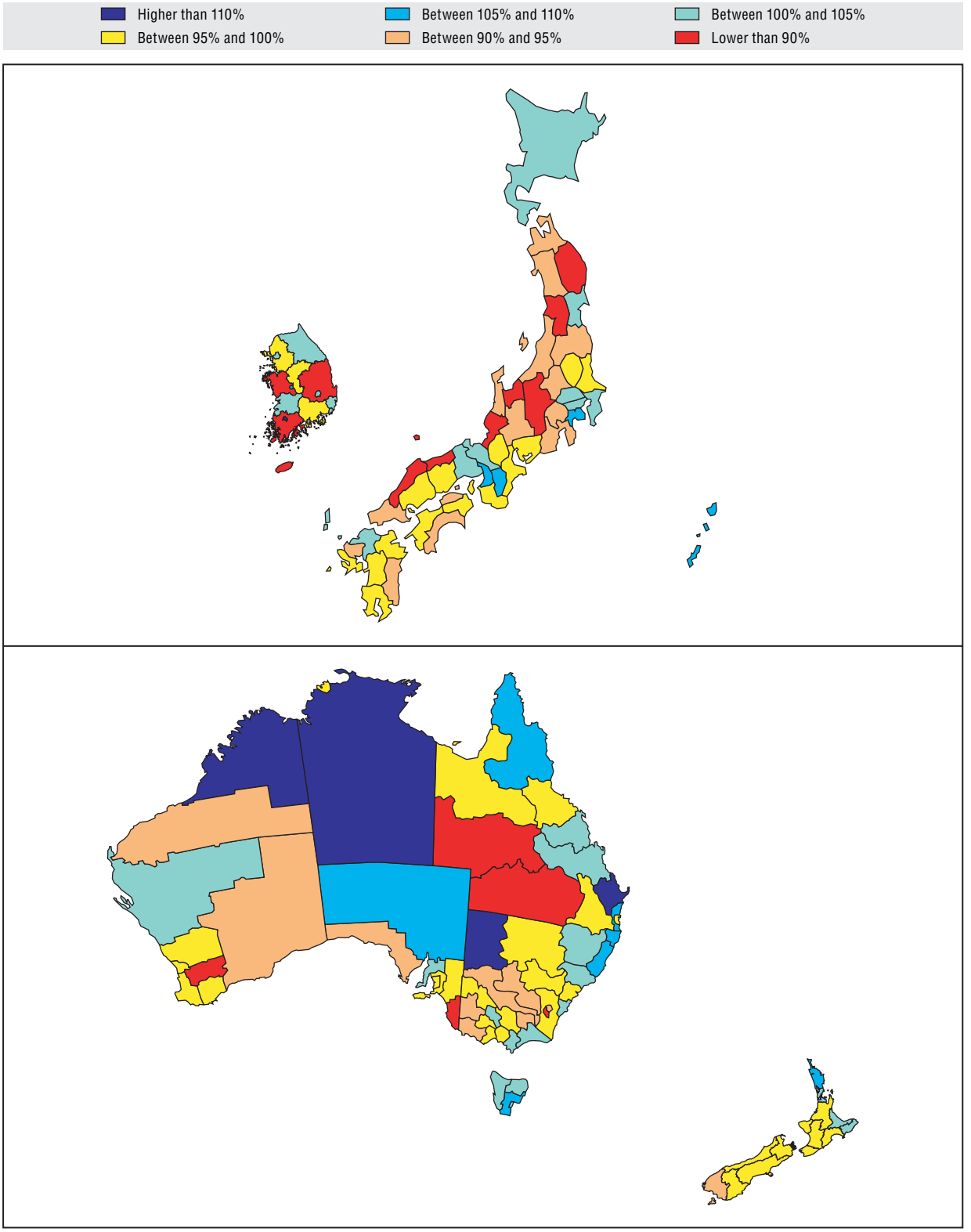


Percentage of the population aged 15-64 living in regions with a participation rate below the national average – 2001

Statlink: *http://dx.doi.org/10.1787/483764636872*

14.5. **Regional activity rate: Asia and Oceania TL3**

Percentage of national activity rate 2001



Source: OECD Territorial Database.

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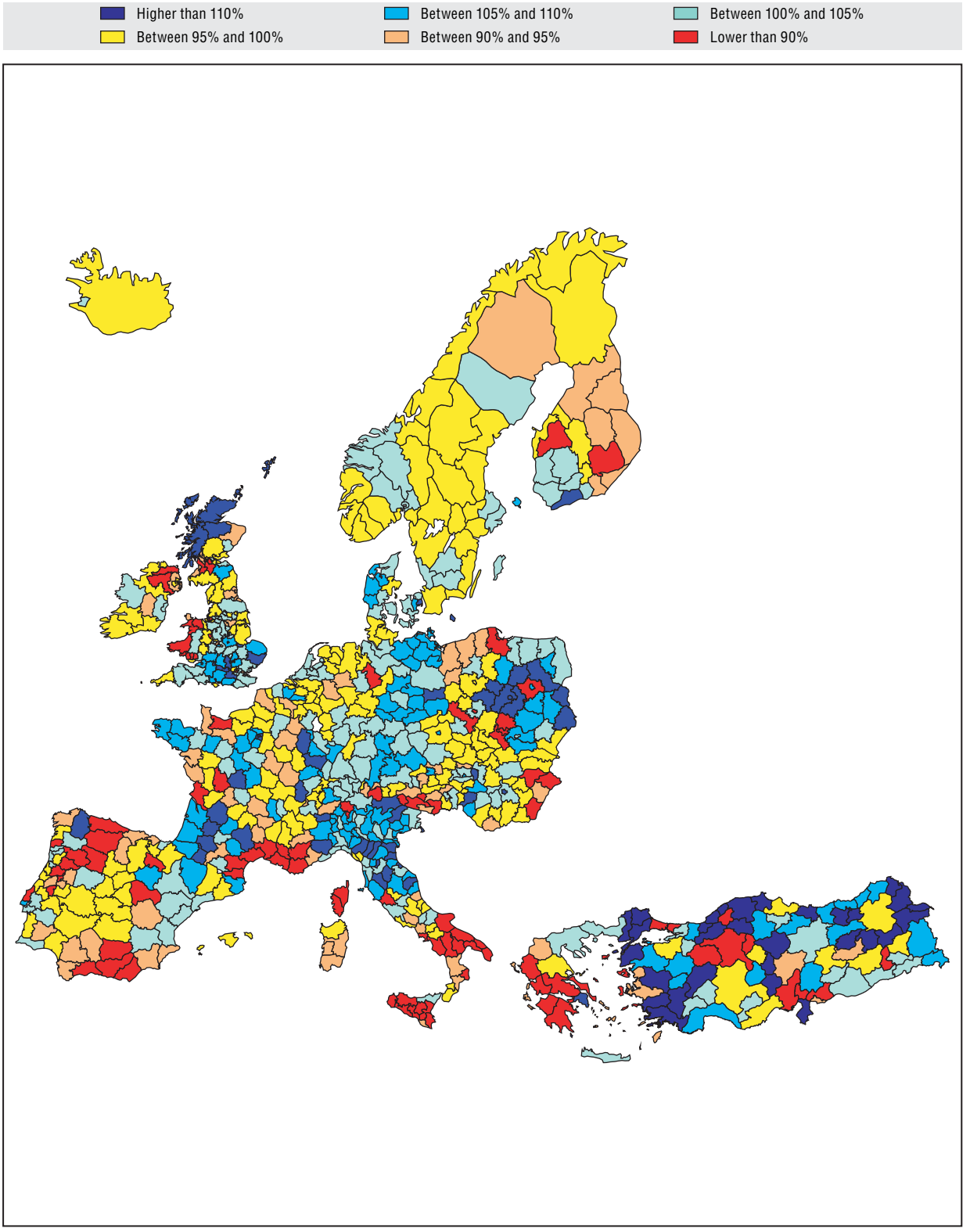
14.6. **Regional activity rate: Europe TL3**

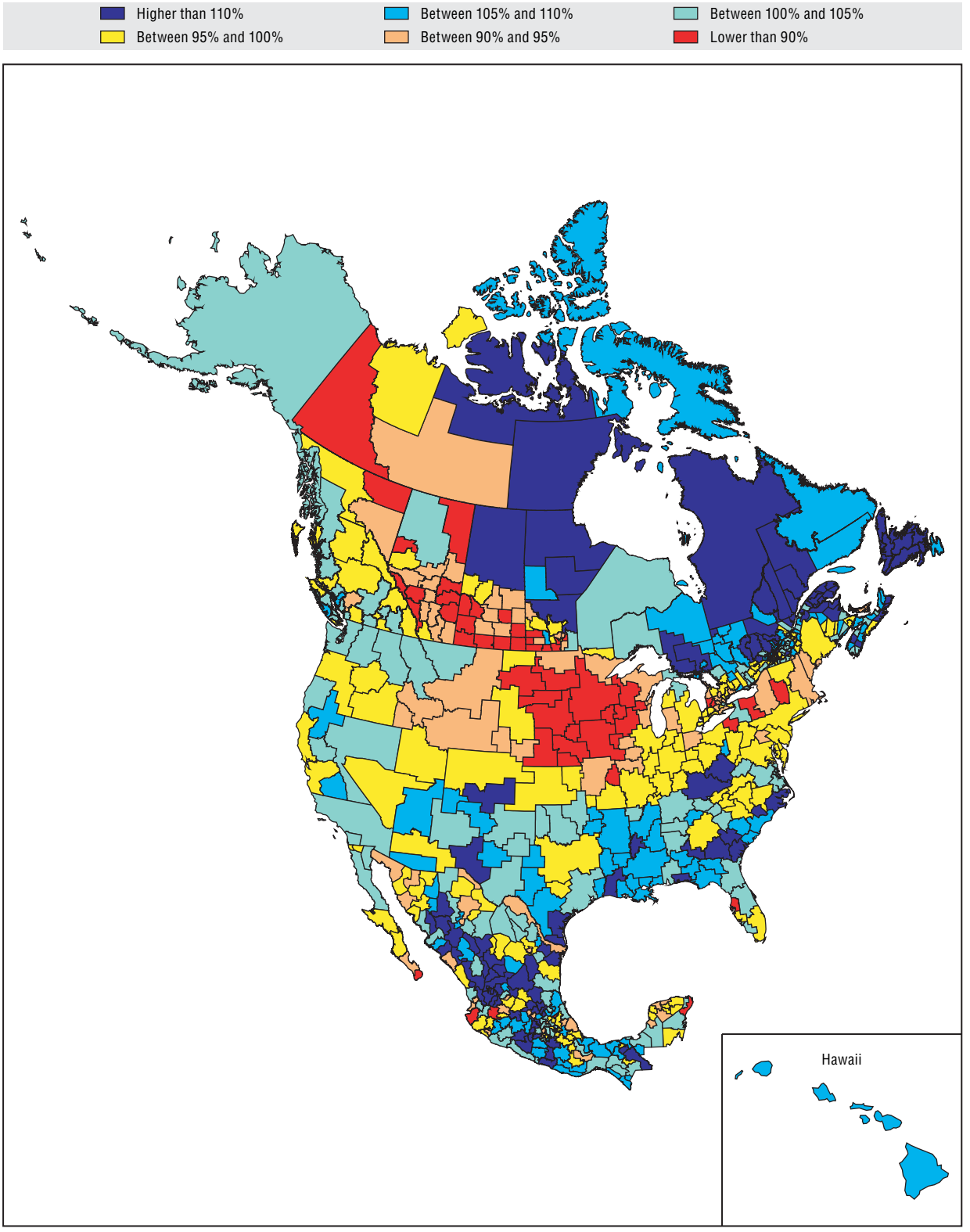
Percentage of national activity rate 2001



Source: OECD Territorial Database.

14.7. **Regional activity rate: North America TL3**

Percentage of national activity rate 2001



Source: OECD Territorial Database.

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Entering the labour market: job opportunities and regional disparities

Activity rates, *i.e.* the ratio between the labour force and population, vary significantly among regions. These differences may be the result of three factors: demographic trends, social behaviour and economic opportunities.

The propensity to participate in the labour market tends to change with age: it is low for young people during education; it increases for adults and it decreases again for elderly people because of retirement. Therefore, the larger the percentages of young or elderly people in the population, the lower the activity rates.

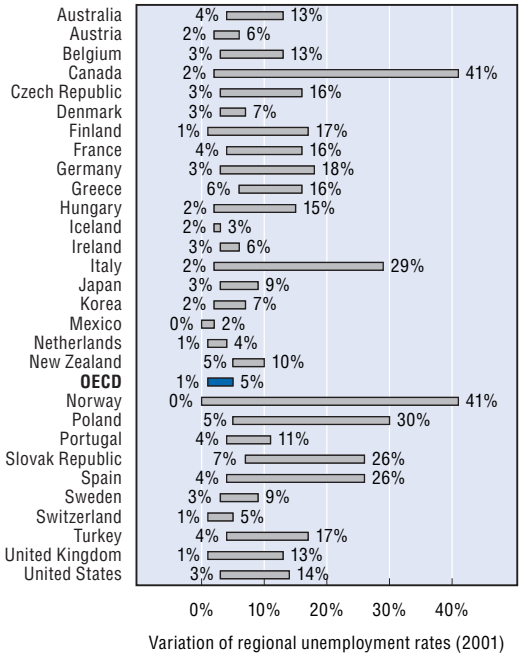
Activity rates are also affected by the sex composition of the population. Owing to social customs, labour market participation tends to be lower for women than for men so that the larger the share of women in a region the lower its activity rate.

The third factor affecting activity rates is the degree of economic opportunity. In fact, the higher a region's unemployment rate, the lower the probability for an individual to find a job and, therefore, his incentive to enter the labour market.

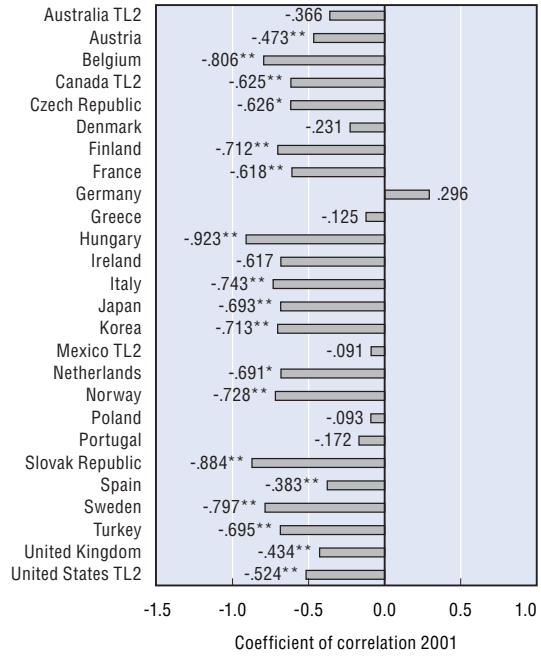
While the first two factors are exogenous – ageing is a demographic trend and low female participation rates depend on social customs – economic opportunities are endogenous and can be modified by opportune policies. Marked regional disparities in unemployment rates (Figure 14.8) suggest that job opportunities may vary significantly among regions. Figure 14.9 shows the correlation coefficients between regional participation rates and unemployment rates.

In 21 out of 28 countries, the correlation is negative and statistically significant, indicating that participation rates are low in regions of high unemployment. This general pattern suggests that regional differences in job opportunities are a major explanation for the observed differences in labour market participation.

14.8. **Unemployment rates vary significantly among regions**



14.9. **Participation rates are low in high-unemployment regions**



* Indicates significant at 95%.
** Indicates significant at 99%.

Germany is the only country where participation rates are higher in regions of high unemployment, a result probably driven by the eastern regions.

15. The factors of regional competitiveness

Economic performance varies significantly among OECD regions. But why are some regions more competitive than others? Regional benchmarking makes it possible to identify the factors of success in certain regions and assess the existence of unused resources in others.

Economic performance can be measured as the difference between the level of GDP per capita in a region and the national average, *i.e.* the benchmark. This difference is the result of one or more of the following factors: average labour productivity, industry specialisation, skills, employment rate, commuting, ageing and activity rates (see "Sources and Methodology, Indicator 15").

Each of these factors can be interpreted as an indicator of the determinants of economic performance at the regional level. Average labour productivity is a proxy for the productivity of the regional production system, specialisation measures the impact of high value added activities on GDP, the employment rate is a measure of the efficient functioning of the local labour market, skills are a proxy for the stock of human capital, activity rates summarise the characteristics of the regional labour force, ageing the impact of age on participation rates, and commuting rates are a proxy for the effects of geographic location.

The benchmarking results (Table 15.1) make it possible to identify the main factors explaining high GDP per capita in certain regions (comparative advantage) and low GDP per capita in others (comparative disadvantage).

Productivity appears to be the main comparative advantage in a majority of regions with high GDP per capita (43%). It is also the most frequent comparative disadvantage in an even larger majority of regions with low GDP per capita (62%).

High participation in the labour market appears to be the second most frequent comparative advantage in regions with high GDP per capita (20%). However, labour force participation is the main explanation of low competitiveness in only 8% of regions with a level of GDP per capita below the national average.

The importance of commuting, specialisation and employment rates seem to be similar in regions with low and high GDP per capita at about 15% for commuting, 7% for specialisation and 6% for the employment rate (7% in regions with low GDP per capita).

Finally, skills seem more often to be a comparative advantage than an explanation of poor performance. They are the main comparative advantage in 6% of regions with high GDP per capita against only 1% of regions with low GDP per capita.

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15.1. **Main factors of regional competitiveness**[1]

	GDP per capita above the national average								GDP per capita below the national average								Total number of regions
	Number of regions	Specialisation	Productivity	Skills	Employment rate	Commuting	Age	Activity rate	Number of regions	Specialisation	Productivity	Skills	Employment rate	Commuting	Age	Activity rate	
Australia	5	0	3	1	0	0	0	1	3	0	3	0	0	0	0	0	8
Austria	12	8	4	0	0	0	0	0	23	15	8	0	0	0	0	0	35
Belgium	3	0	1	0	0	2	0	0	8	0	3	0	0	5	0	0	11
Canada	4	0	3	0	0	0	0	1	8	0	6	0	0	0	1	1	12
Czech Republic	1	0	1	0	0	0	0	0	13	0	12	0	0	1	0	0	14
Denmark	2	0	1	0	0	1	0	0	13	0	6	0	0	7	0	0	15
Finland	3	0	2	0	0	1	0	0	17	0	9	0	1	2	0	5	20
France	10	0	3	0	1	4	1	1	86	0	58	1	0	15	0	12	96
Germany	8	0	7	0	0	0	0	1	41	1	29	0	3	6	0	2	49
Greece	4	1	3	0	0	0	0	0	9	4	0	0	0	0	0	5	13
Hungary	4	0	2	0	0	0	0	2	16	0	14	0	0	2	0	0	20
Ireland	2	0	1	1	0	0	0	0	6	0	4	0	1	1	0	0	8
Italy	53	0	10	0	11	4	0	28	50	0	20	0	11	12	0	7	103
Japan	8	0	1	6	0	1	0	0	39	0	18	0	17	4	0	0	47
Korea	7	1	6	0	0	0	0	0	9	1	7	0	0	1	0	0	16
Mexico	12	0	10	0	0	0	0	2	20	2	17	0	0	0	0	1	32
Netherlands	4	0	2	0	0	2	0	0	8	0	4	0	0	4	0	0	12
Norway	2	1	0	0	0	1	0	0	17	0	15	0	0	2	0	0	19
Poland	10	6	3	0	0	0	0	1	34	14	3	0	3	10	0	4	44
Portugal	3	1	1	0	0	0	0	1	25	9	13	0	0	1	0	2	28
Slovak Republic	2	0	2	0	0	0	0	0	6	0	4	0	1	1	0	0	8
Spain	18	0	9	1	2	2	1	3	30	0	13	3	2	2	4	6	48
Sweden	1	0	1	0	0	0	0	0	20	0	15	0	1	2	0	2	21
Turkey	20	0	10	0	1	0	1	8	61	0	54	0	0	0	2	5	81
United Kingdom	37	0	10	10	0	15	0	2	96	0	62	0	9	20	0	5	133
United States	20	0	14	0	0	6	0	0	31	0	27	0	0	3	0	1	51
OECD	**144**	**8**	**60**	**6**	**8**	**13**	**1**	**26**	**386**	**6**	**60**	**0**	**9**	**16**	**0**	**9**	**530**

1. The table summarises the main explanation for GDP per capita (columns) in each of the OECD regions (rows). In Australia, for example, GDP per capita in 2001 was above the national average in 5 regions and below the national average in 3 regions. The main explanation for high GDP per capita was: high productivity (in 3 regions); high skills (in 1 region), and high activity rate (in 1 region). The main explanation for low GDP per capita was: low productivity (in all 3 regions).

16. Labour productivity

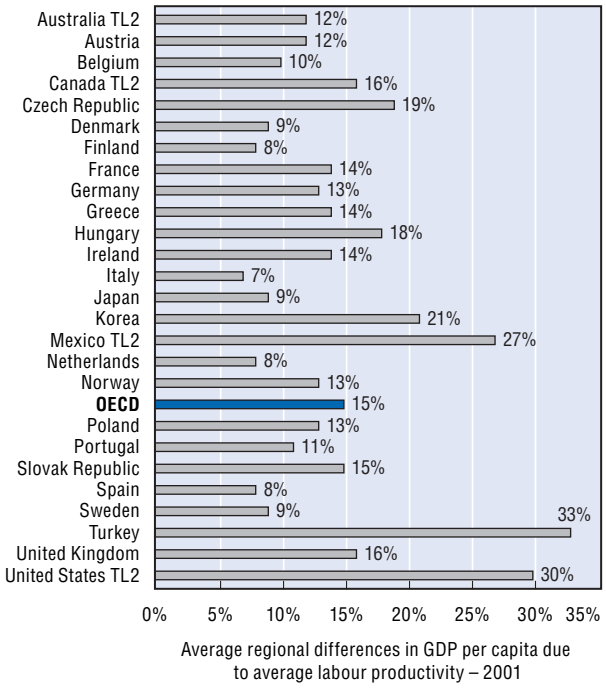
A large part of regional differences in GDP per capita is due to differences in productivity, *i.e.* the value of GDP per worker. Differences in productivity may be due to specialisation in industries with low productivity, inadequate infrastructure or inefficient production technology, which includes intra-firm organisation and inter-firm linkages.

Figure 16.1 shows the extent to which regional differences in GDP per capita are due to productivity. Average labour productivity generally accounts for a difference of more than 15 percentage points among regions.

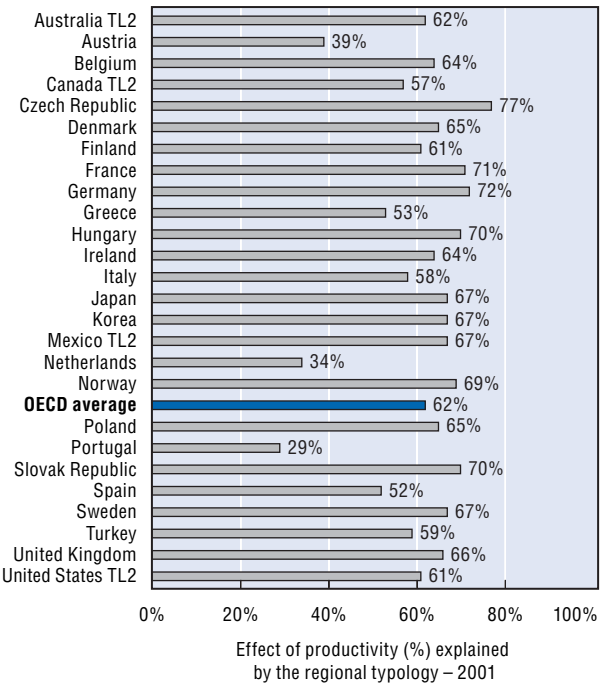
This effect is considerably larger in Turkey and the United States, where regional differences in GDP per capita due to productivity are above 30 percentage points. The effect of productivity is also large in Mexico (27%), Korea (21%) and the Czech Republic (19%). It is smaller but still significant in Italy (7%) and the Netherlands (8%).

As productivity depends on physical infrastructure, technology and skills, urban regions tend to have higher productivity than rural and intermediate regions. On average, the distinction between urban, rural and intermediate regions explains over 60% of the regional differences in GDP per capita due to productivity (Figure 16.2).

16.1. **In 2001, regional differences in GDP per capita due to productivity were over 15%**



16.2. **On average, about half of the effect of specialisation on regional performances is accounted by regional type**



Statlink: *http://dx.doi.org/10.1787/825720177605*

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is accounted by regional differences in average labour productivity. Average labour productivity is defined as the ratio between GDP and employment – measured at the place of work – and is adjusted for differences in industry specialisation.

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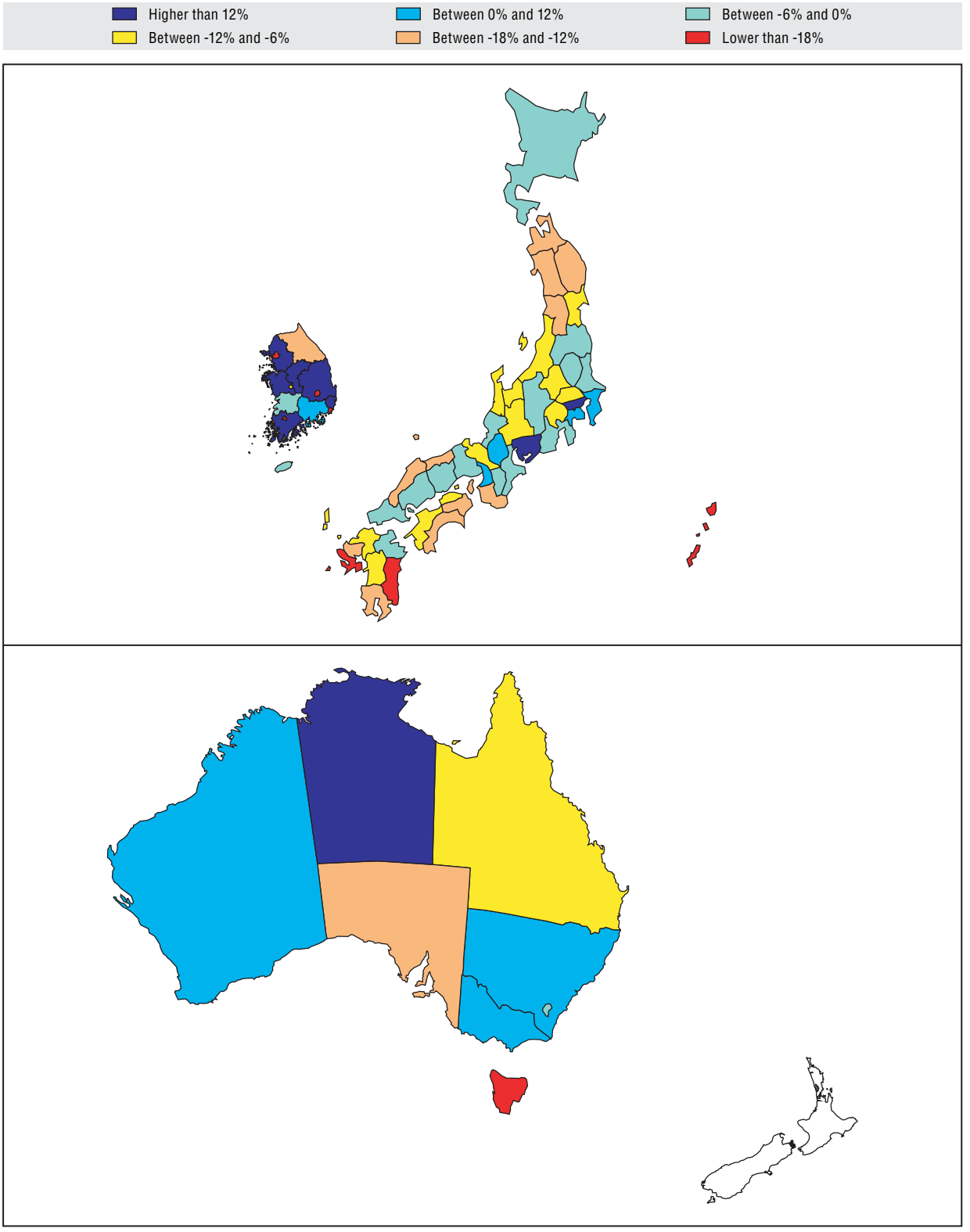
16.3. **Differences in GDP per capita due to productivity: Asia TL3 and Oceania TL2**

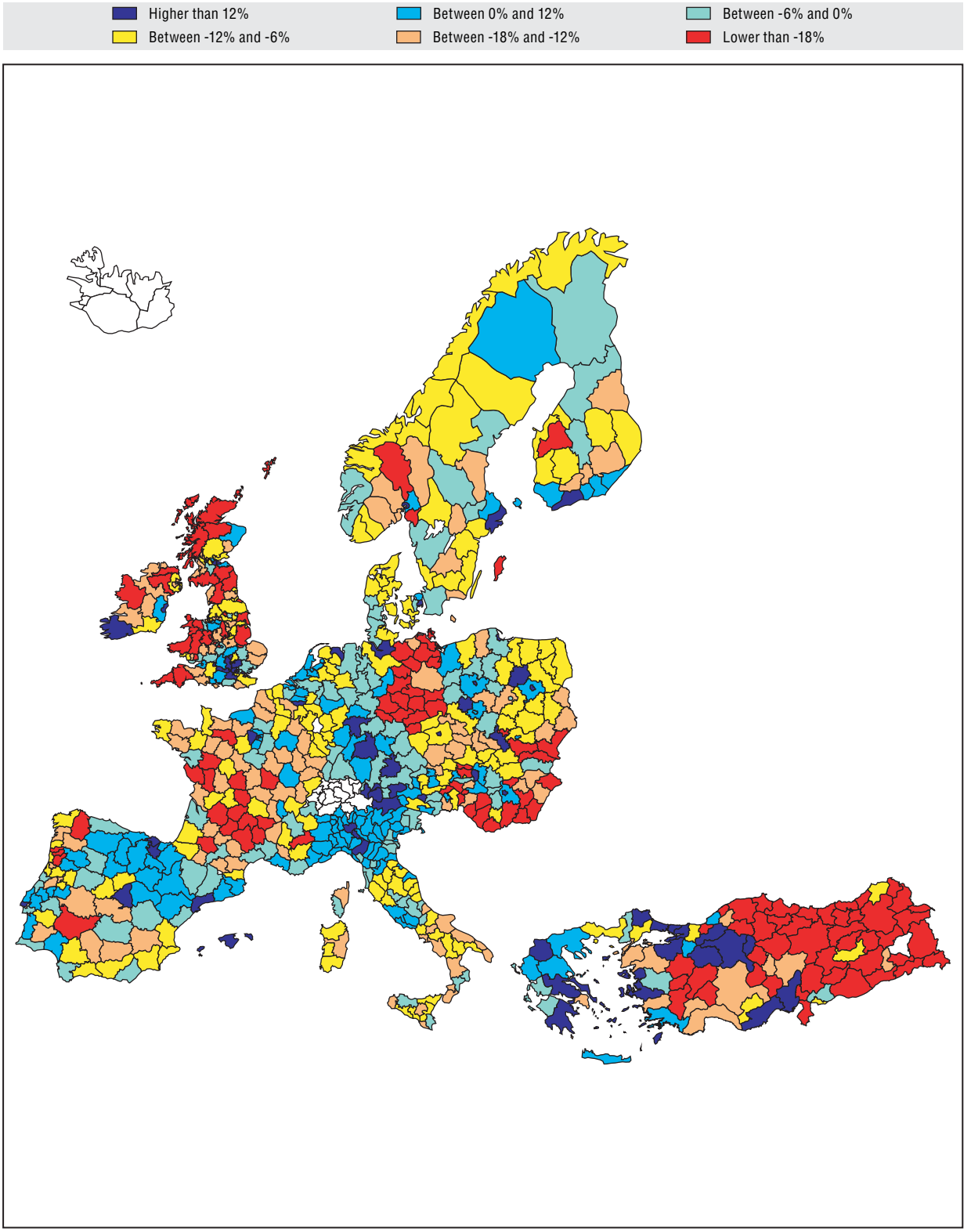
Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

16.4. **Differences in GDP per capita due to productivity: Europe TL3**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

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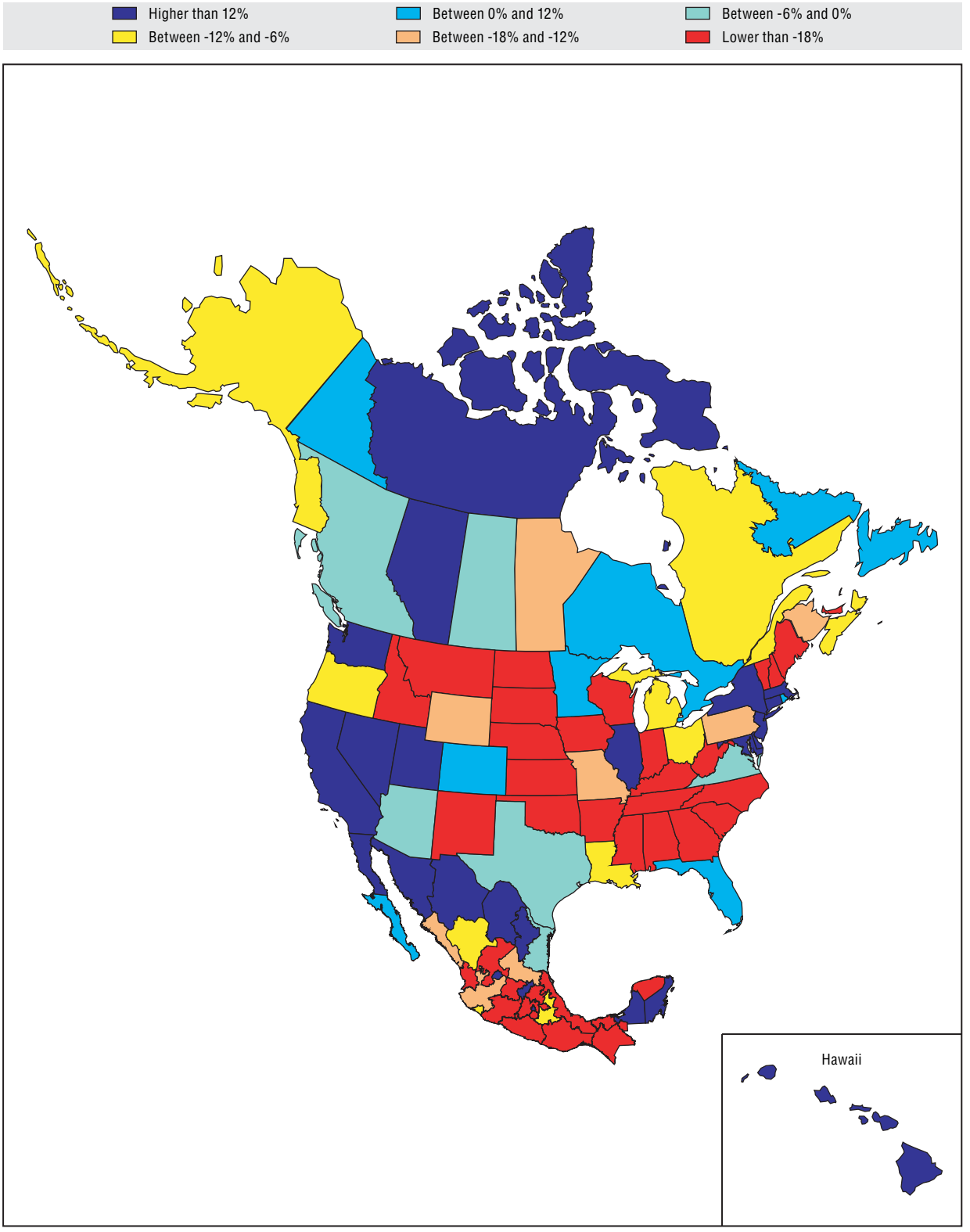
16.5. **Differences in GDP per capita due to productivity: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

17. Industry specialisation

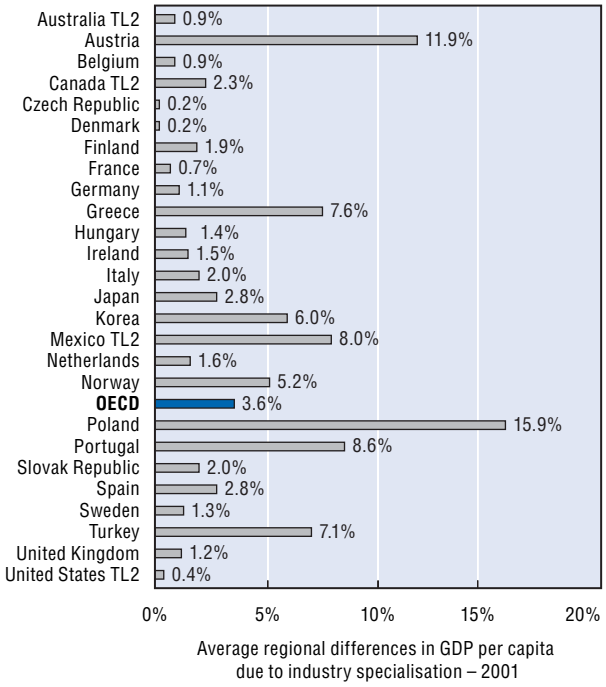
Regional differences in GDP per capita may be the result of specialisation in activities with low value added. In general, GDP per worker tends to be higher in manufacturing and services than in agriculture. Therefore, the larger the share of industries with a low level of GDP per worker, the lower the region's level of GDP per capita.

Figure 17.1 shows of the extent to which regional differences in GDP per capita are due to industry specialisation. On average, specialisation accounts for a difference of 3.6 percentage points among regions but it is considerably larger in some countries. In Poland and Austria, regional differences in GDP per capita due to specialisation are of the order of 16 and 12 percentage points, respectively.

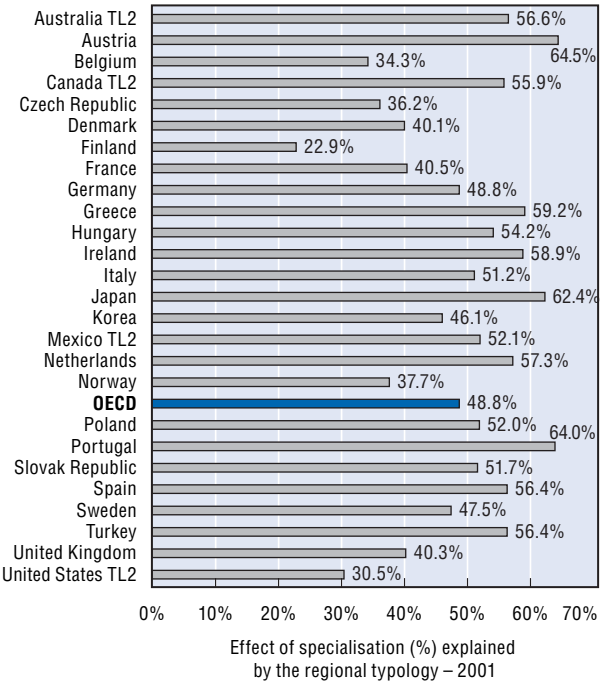
In Greece, Mexico, Portugal and Turkey, the average difference in GDP per capita due to specialisation is no less than 7%. On the other hand, the effect of specialisation on regional differences appears very small in the Czech Republic and Denmark (0.02%).

Specialisation is the result of natural endowments and geographic location. Urban regions tend to specialise in different activities than rural or intermediate regions. On average, the distinction between urban, rural and intermediate regions explains almost half of regional differences in GDP per capita due to specialisation (Figure 17.2). Therefore, natural endowments and geography seem to be a major reason for differences in regional specialisation.

17.1. **In 2001, regional differences of close to 4% in GDP per capita were due to specialisation**



17.2. **On average, about half of the effect of specialisation on regional performances is due to regional type**



Statlink: *http://dx.doi.org/10.1787/878245172867*

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is accounted by regional differences in industry specialisation. Industry specialisation is measured by the distribution of employment across 3 sectors: Agriculture, Forestry and Fishery; Industry and Construction; and Services.

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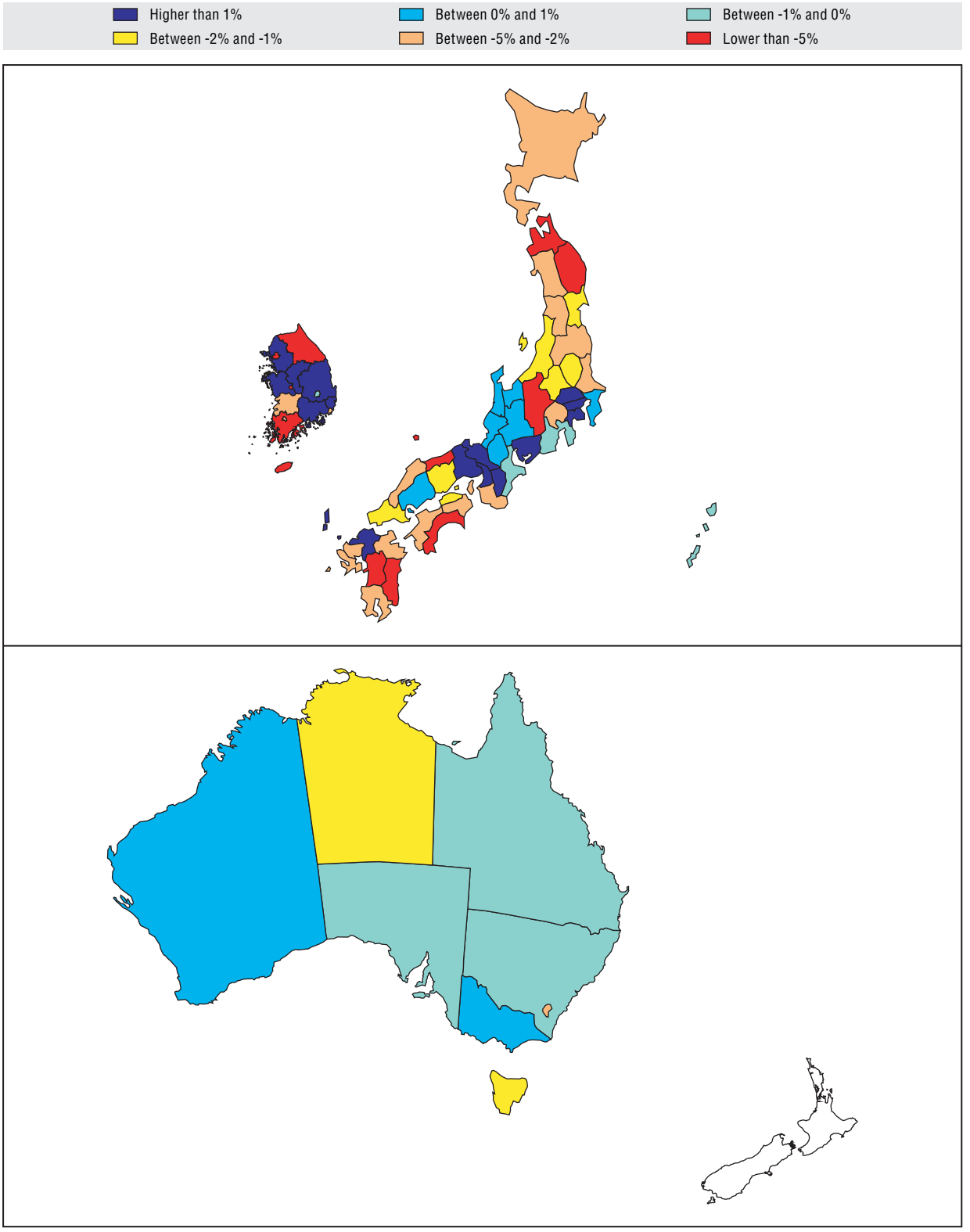
17.3. **Differences in GDP per capita due to specialisation: Asia TL3 and Oceania TL2**

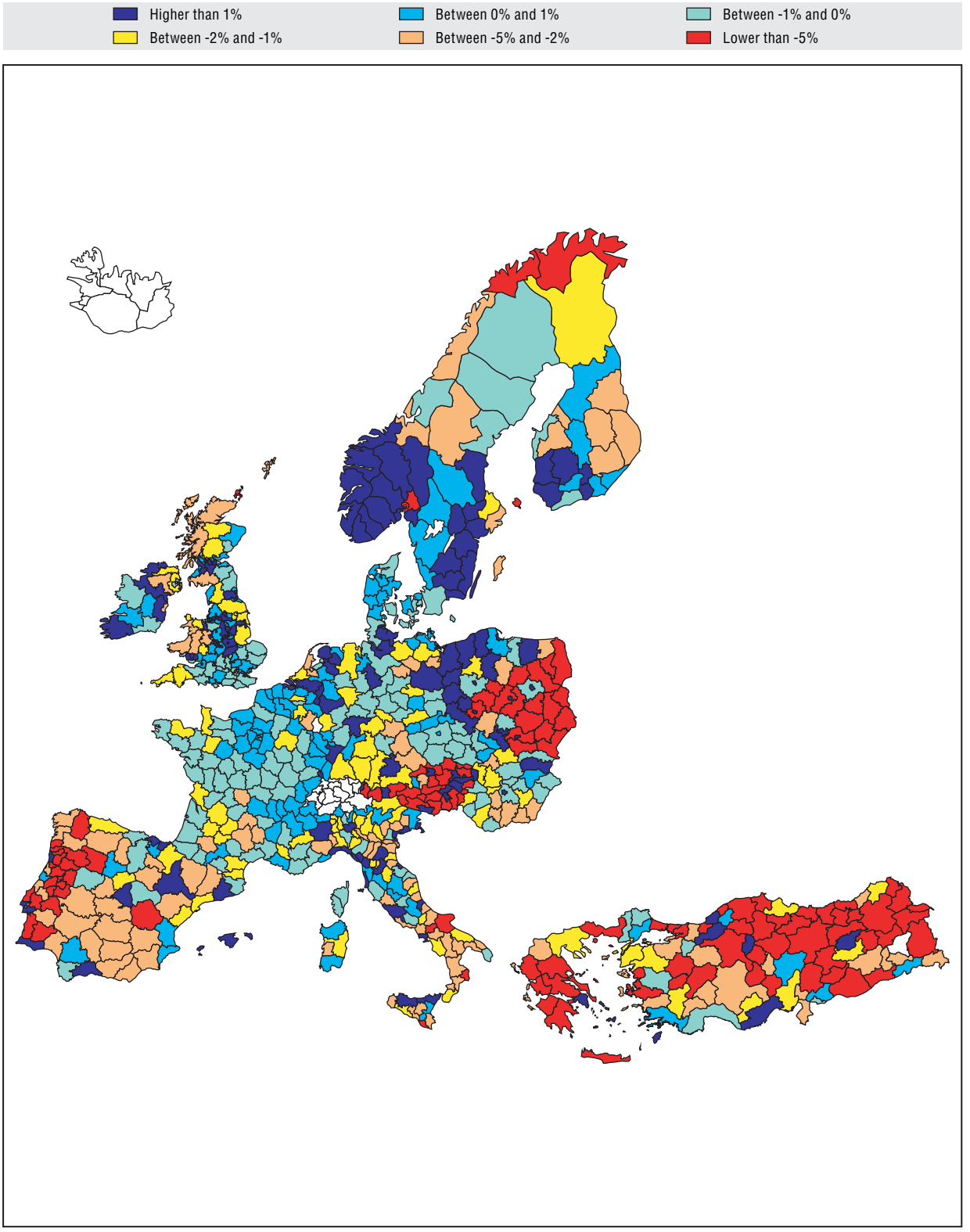
Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

17.4. **Differences in GDP per capita due to specialisation: Europe TL3**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

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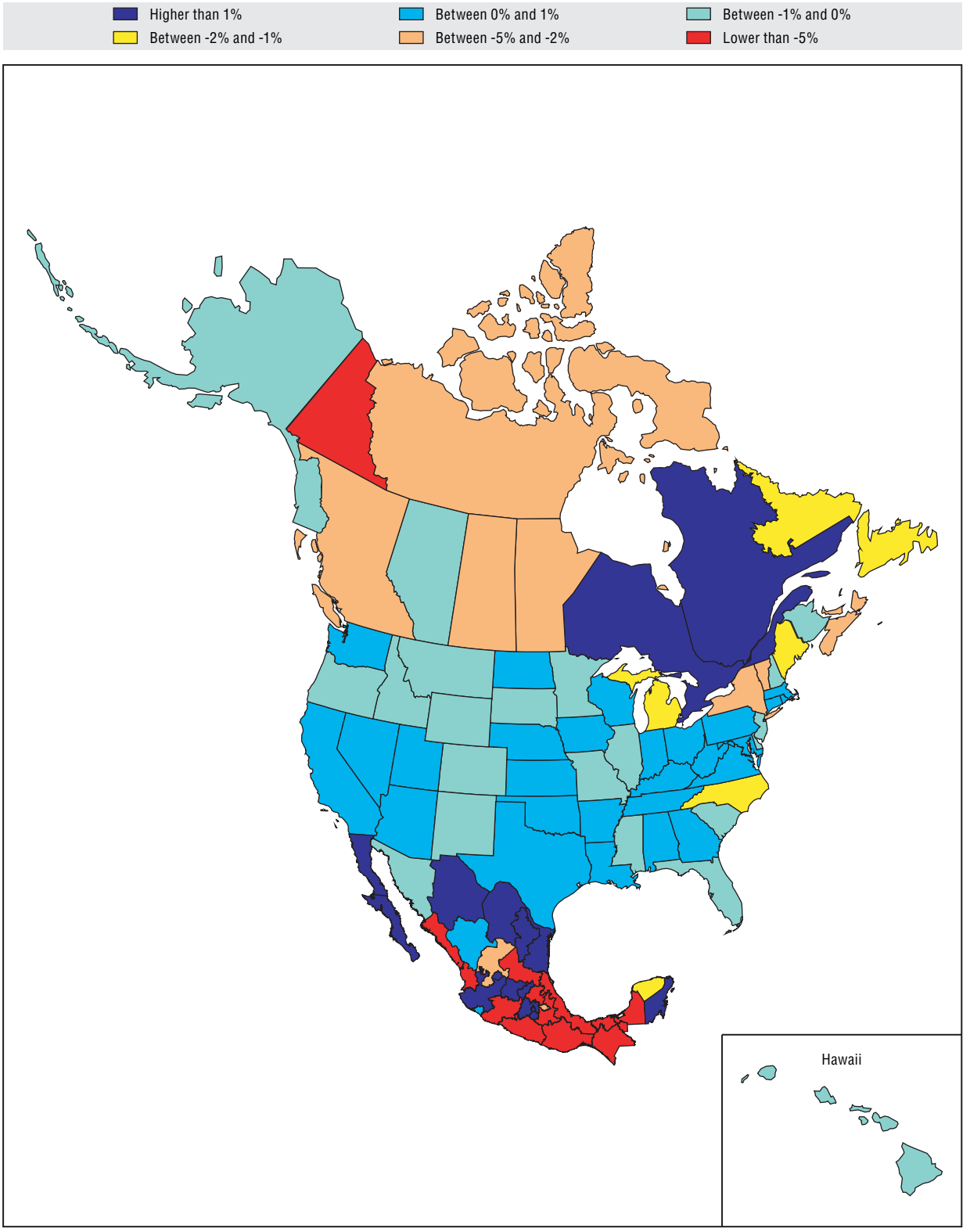
17.5. **Differences in GDP per capita due to specialisation: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

18. Skills

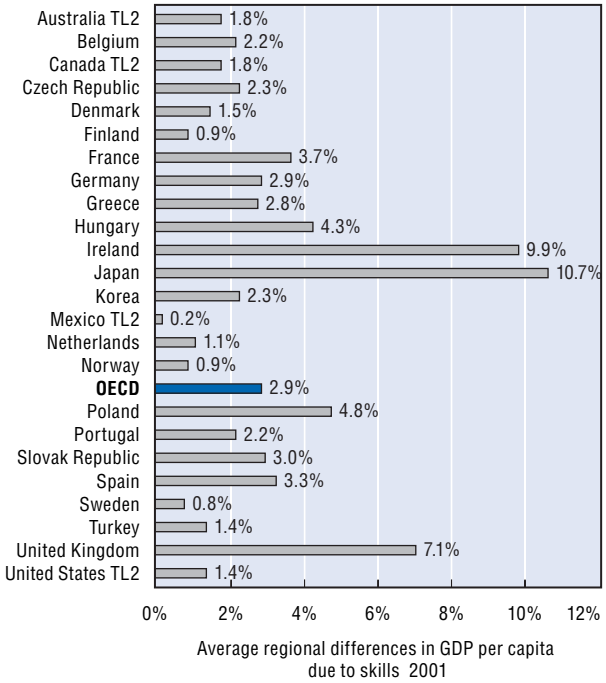
Regional differences in GDP per capita may be due to the skills profile of the labour force. In general, highly skilled individuals tend to have higher employment rates than those with low skills. Therefore, the larger the share of highly skilled individuals in a region, the higher its employment rate, other things being equal.

Figure 18.1 shows the extent to which regional differences in GDP per capita are due to differences in skills. On average, skills account for a difference of 3 percentage points among regions.

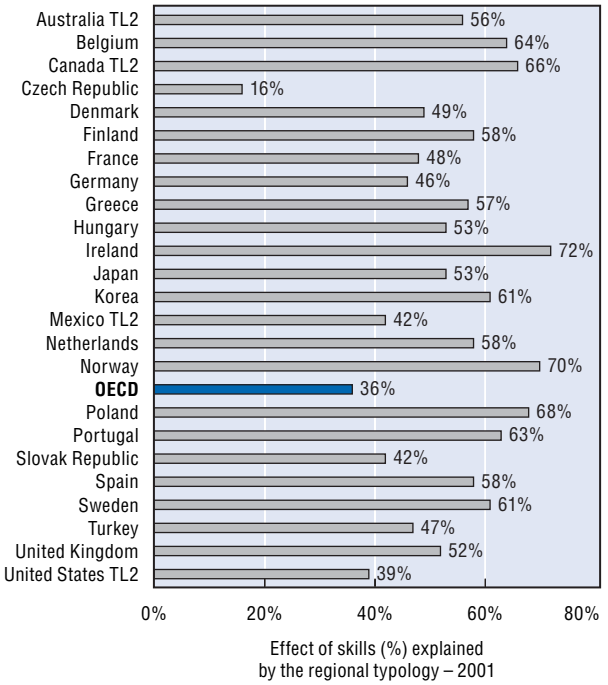
The difference is considerably larger in Ireland and Japan, where regional differences in GDP per capita due to skills are above 10 percentage points. It is also large in the United Kingdom (7%) and Poland (5%) but very small in Mexico (close to 0).

As the skilled population tends to concentrate in urban centres, the impact of skills tends to be greater in urban than in rural and intermediate regions. On average, the distinction between urban, rural and intermediate regions explains more than 60% of the regional differences in GDP per capita due to productivity (Figure 18.2).

18.1. **In 2001, regional differences in GDP per capita due to skills were about 3%**



18.2. **On average, 36% of the effect of skills on regional performance is explained by the regional type**



Statlink: *http://dx.doi.org/10.1787/615787615686*

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is explained by regional differences in the skills profile of the population. Skills are proxied by educational attainments according to the *International Standard Classification of Education* (ISCED).

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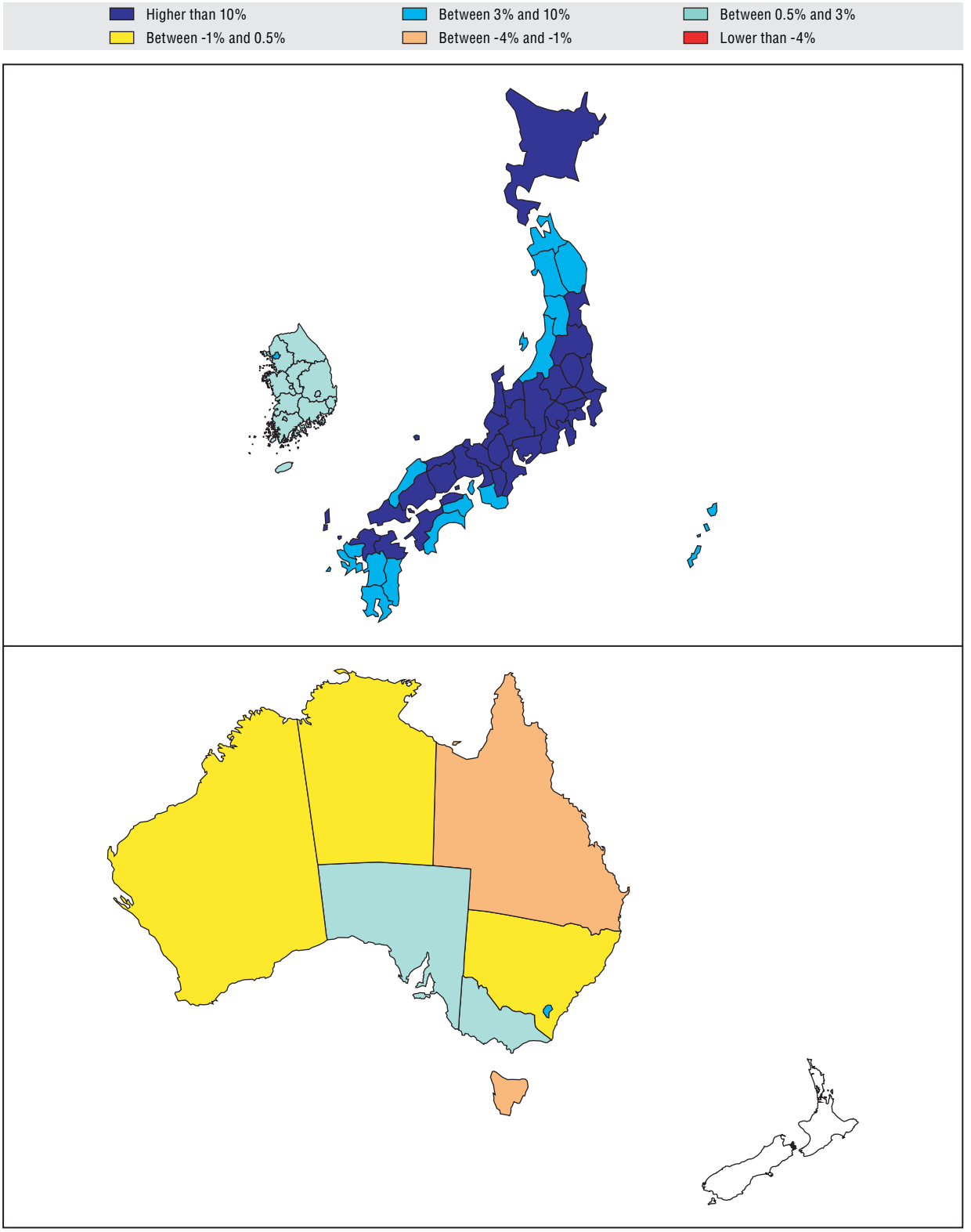
18.3. **Differences in GDP per capita due to skills: Asia TL3 and Oceania TL2**

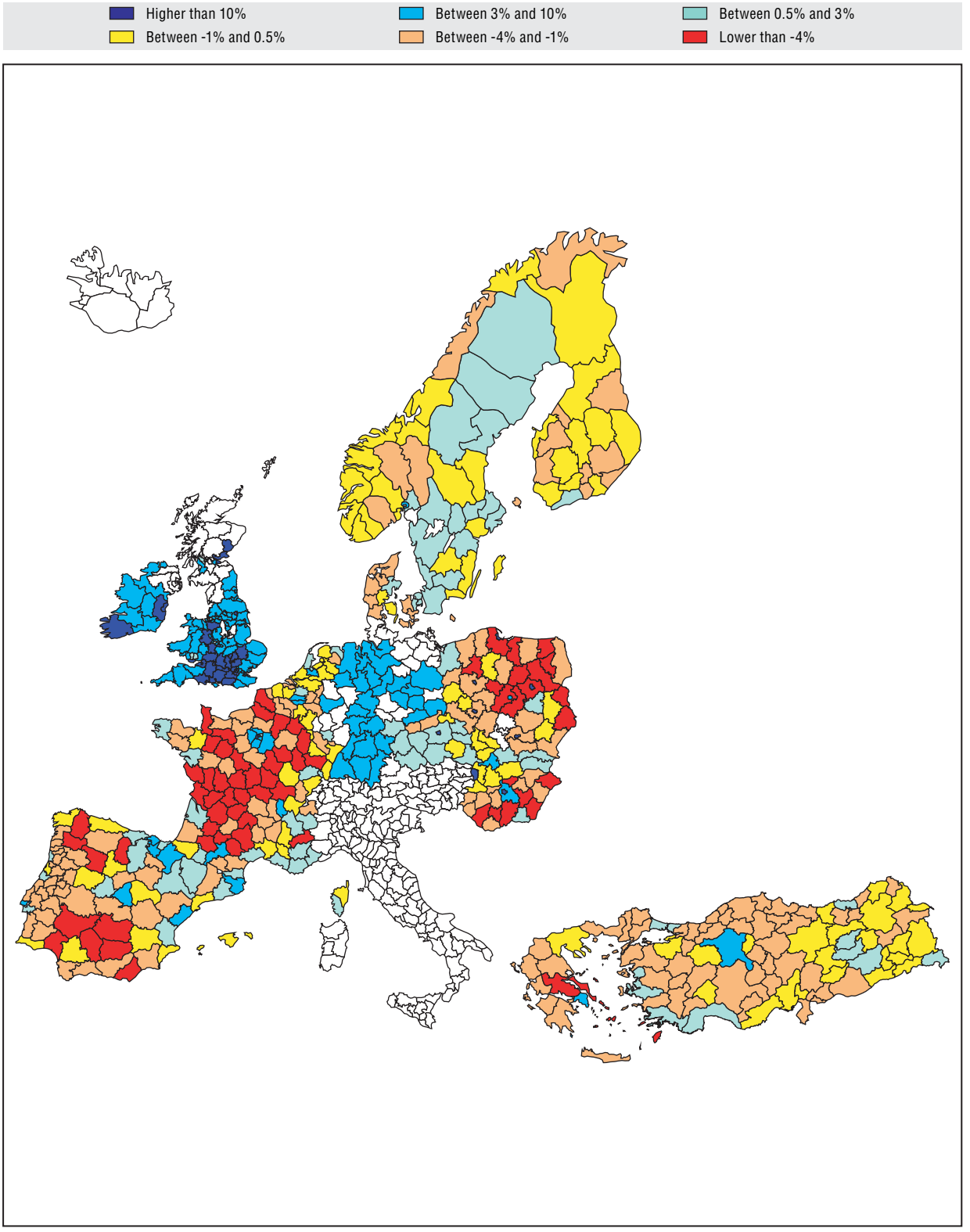
Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

18.4. **Differences in GDP per capita due to skills: Europe TL3**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

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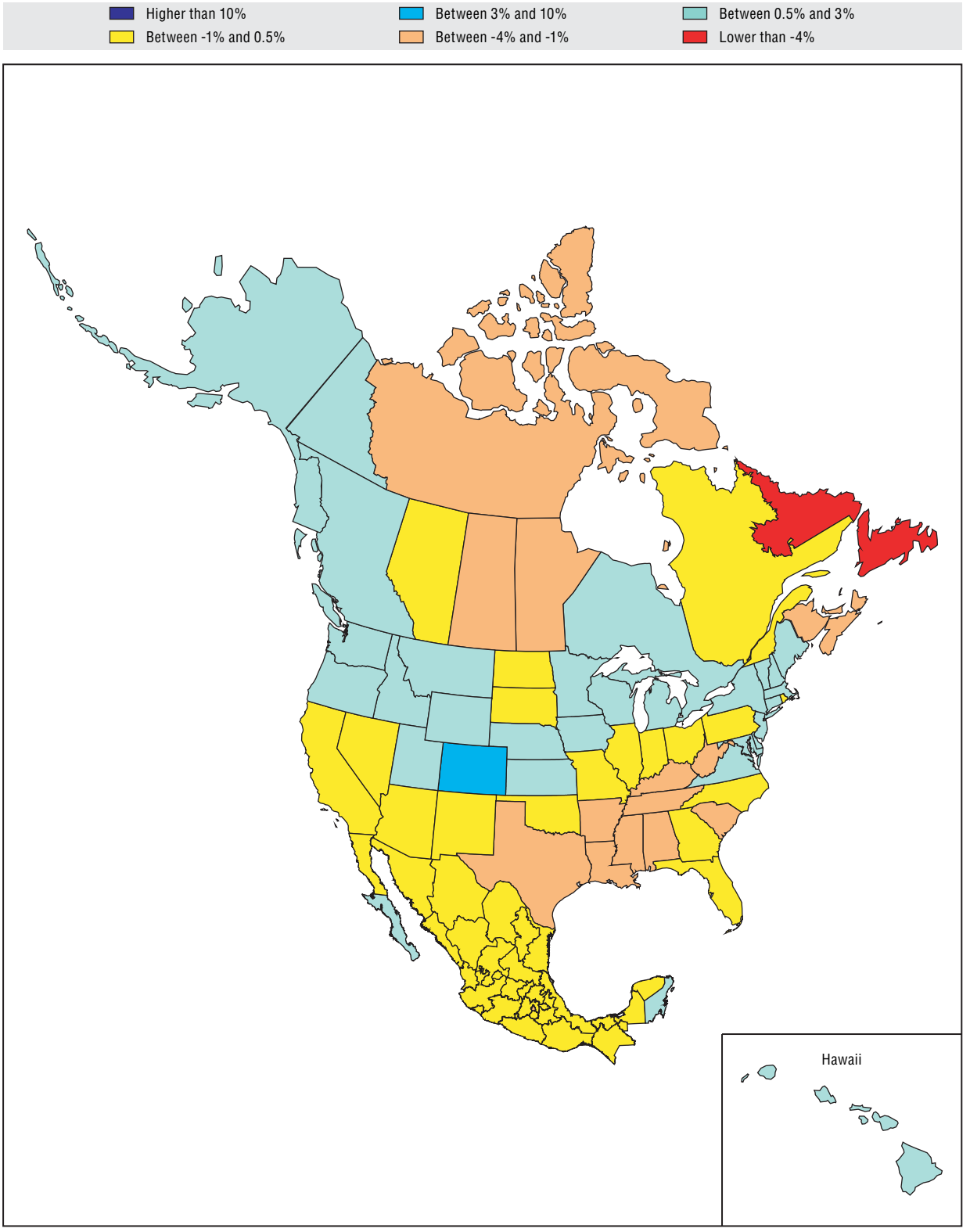
18.5. **Differences in GDP per capita due to skills: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

19. The labour market

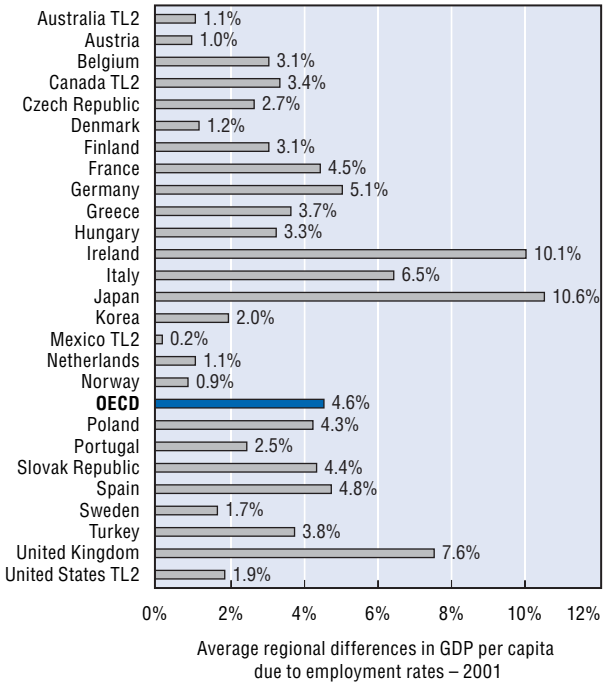
A significant share of regional differences in GDP per capita is due to differences in employment rates. Higher employment rates are a measure of the capability of the regional labour market to match labour demand and supply. Therefore, the greater the flexibility of the regional labour market, the higher its employment rate, other things being equal.

Figure 19.1 shows the extent to which regional differences in GDP per capita are due to differences in employment rates. On average in 2001, employment rates accounted for a difference of 5 percentage points among regions.

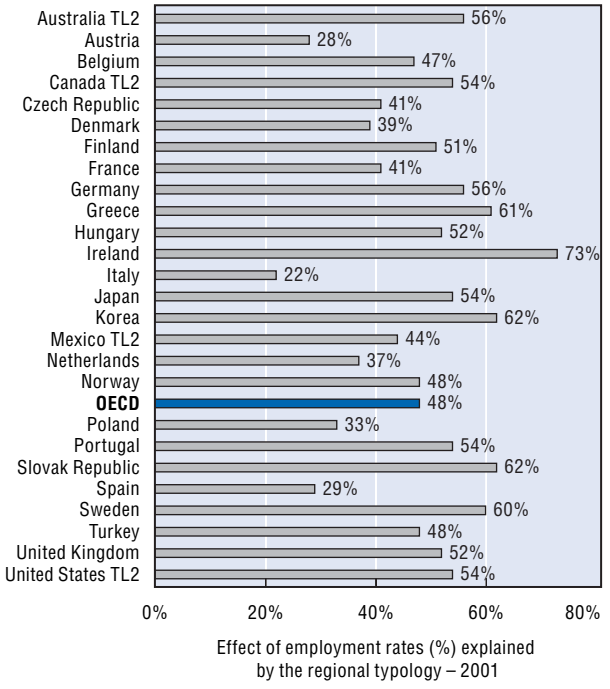
The difference was considerably larger in Ireland and Japan, where it was above 10 percentage points. The effect of the labour market was also large in the United Kingdom (8%) and Italy (7%) but very small in Mexico (close to 0).

The functioning and institutions of the labour market tend to be quite different in urban, intermediate and rural regions. On average, the distinction between these three types of regions explains about half of the regional differences in GDP per capita due to employment rates (Figure 19.2).

19.1. **In 2001, there were regional differences of 5% in GDP per capita due to employment rates**



19.2. **On average, about half of the effect of employment rates on performance is due to the regional type**



Statlink: *http://dx.doi.org/10.1787/482211746485*

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is accounted by regional differences in employment rates. Employment rate is defined as the ratio of employment at the place of work and the labour force. Employment rates are adjusted for differences in the educational attainments of the labour force.

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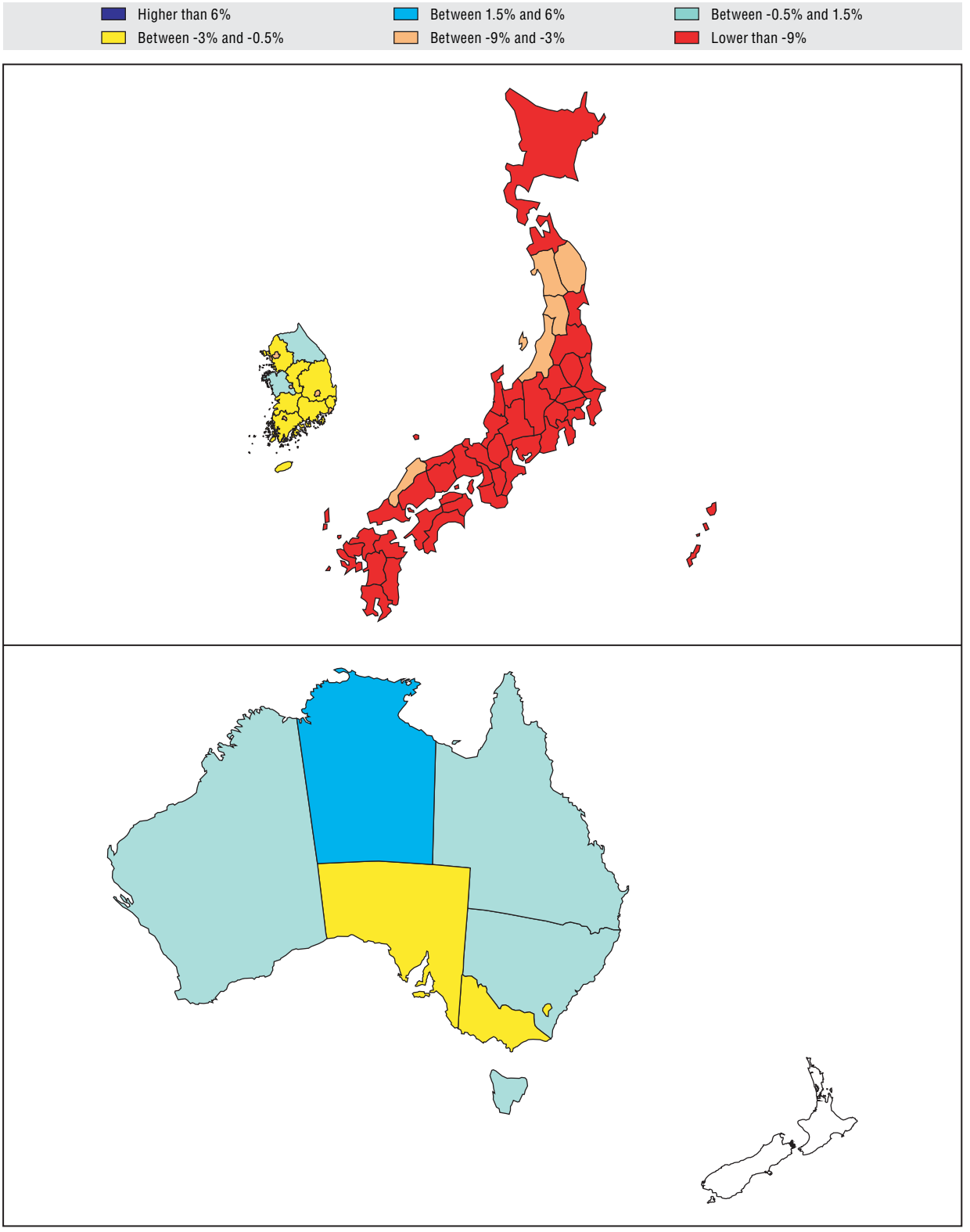
19.3. **Differences in GDP per capita due to employment rate: Asia TL3 and Oceania TL2**

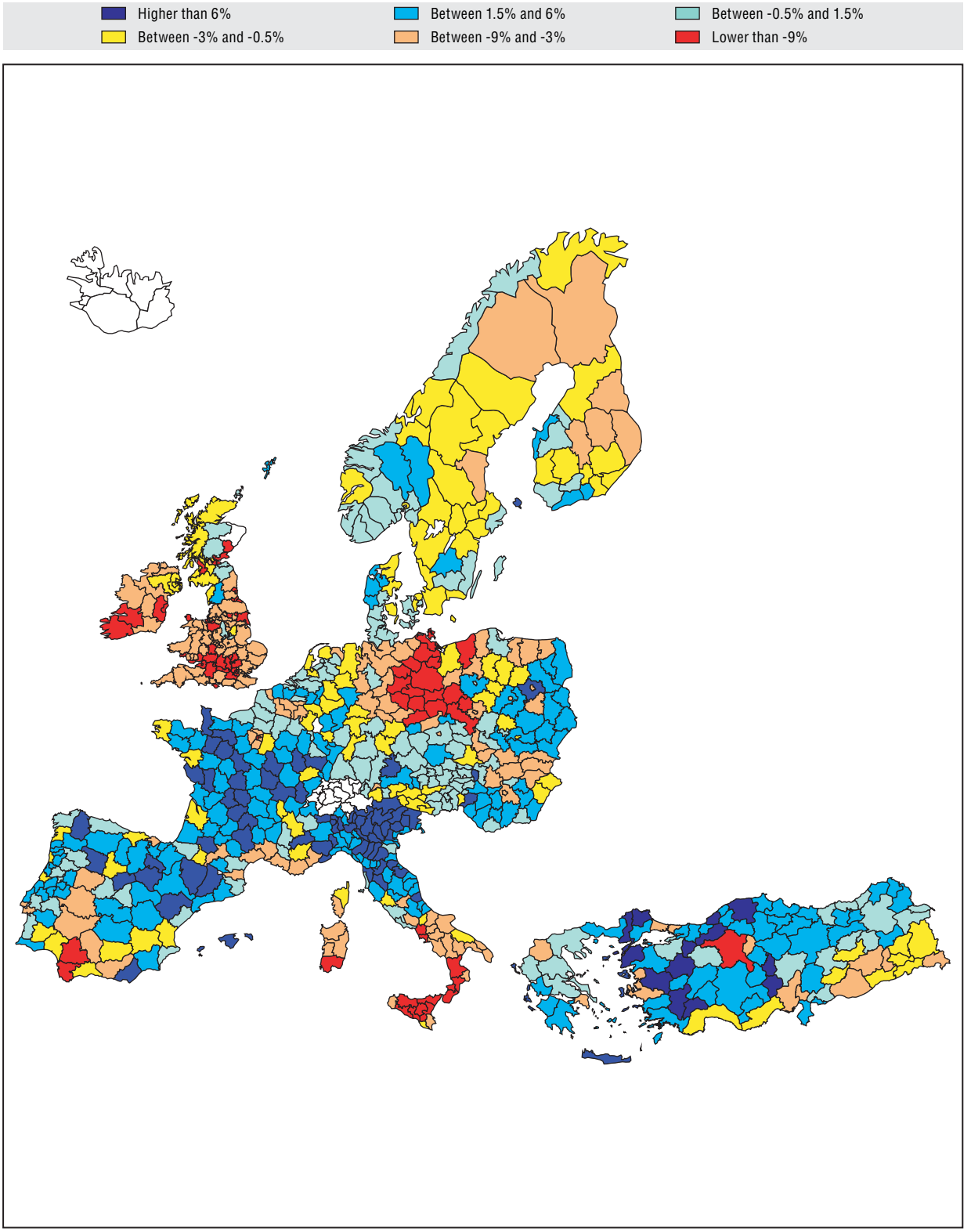
Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

19.4. **Differences in GDP per capita due to employment rate: Europe TL3**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

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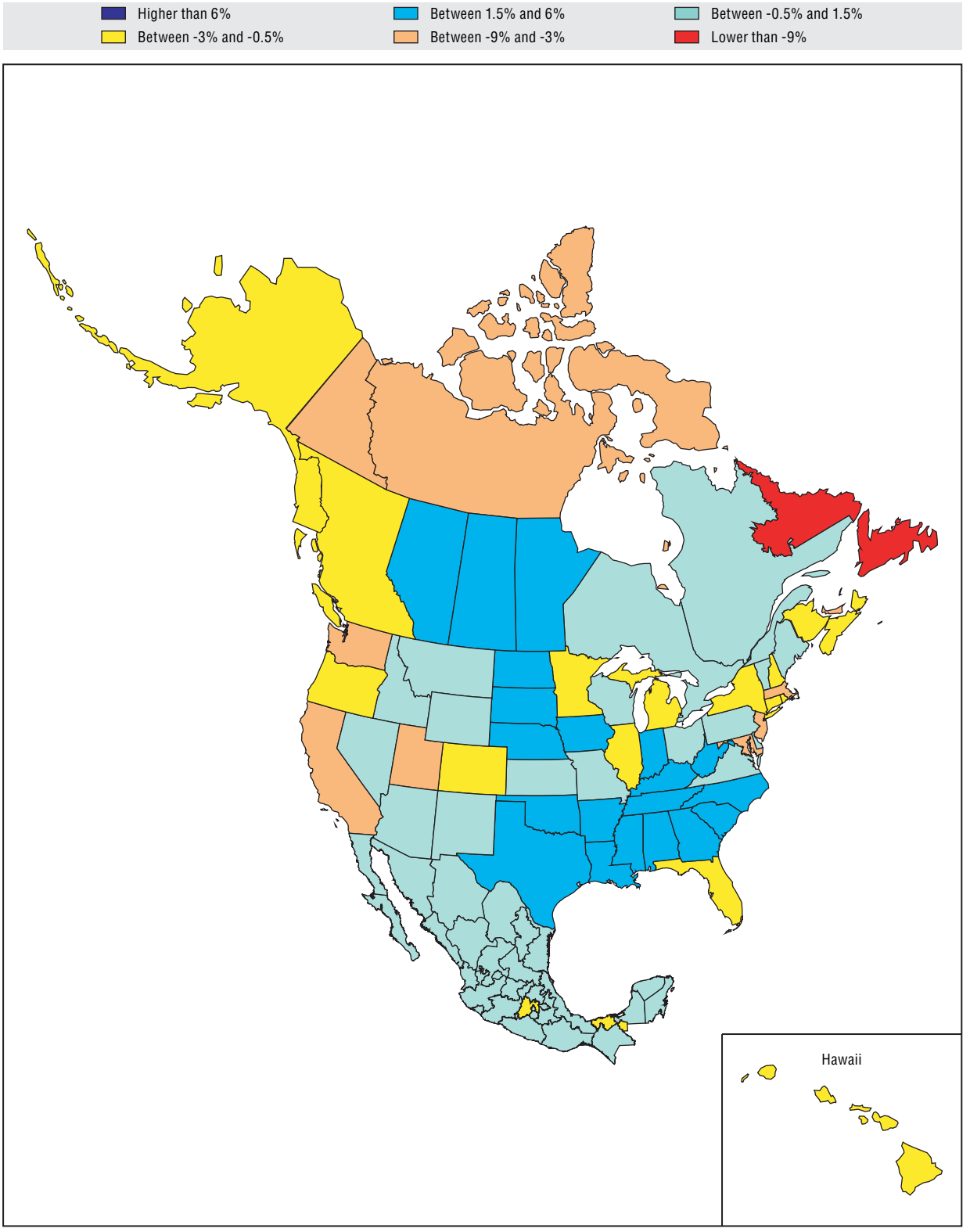
19.5. **Differences in GDP per capita due to employment rate: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

20. Commuting flows

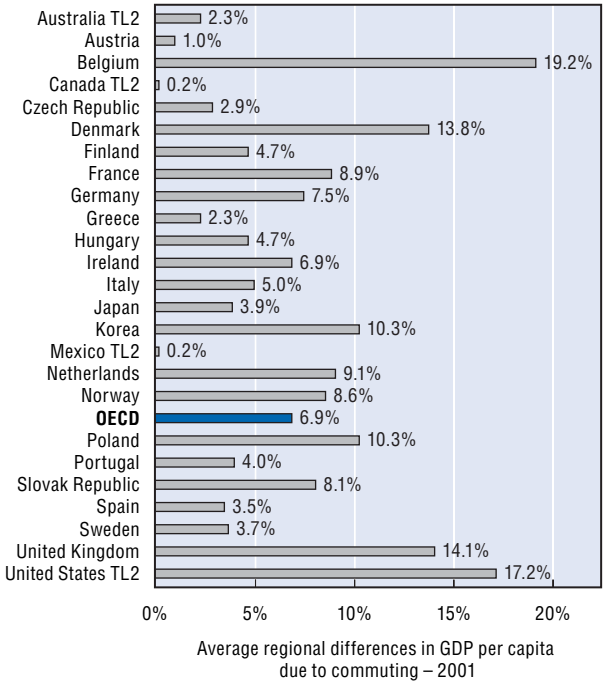
A significant part of regional differences in GDP per capita is due to the commuting of workers between regions. When commuters reside in one region and work in another, GDP per capita is reduced in the region where they live and augmented in the region where they work.

Figure 20.1 shows the extent to which regional differences in GDP per capita are due to commuting flows between regions. On average in 2001, commuting accounted for regional differences of 7 percentage points.

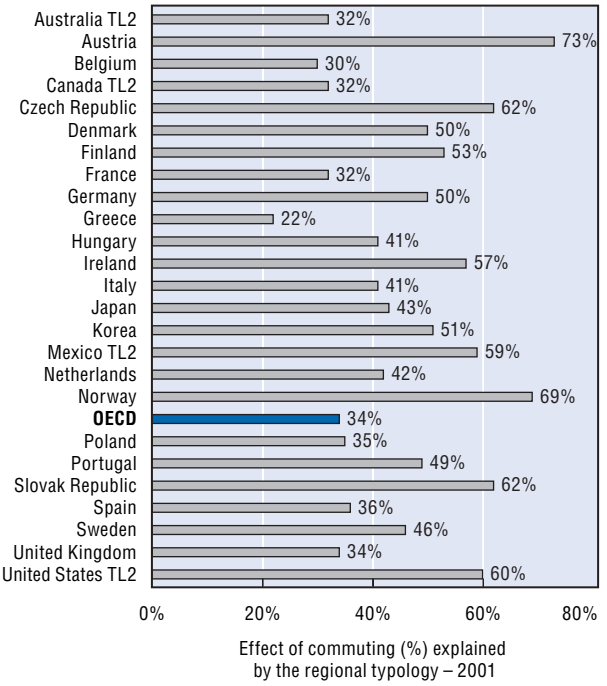
The difference was considerably larger in Belgium (19%), the United States (17%), Denmark and the United Kingdom (14%). The effect of commuting was also large in Korea and Poland (10%) but very small in Canada and Mexico (close to 0).

As urban centres are major attractors of commuters, one may expect the effect of commuting to vary with the type of region. On average, the distinction between urban, intermediate and rural regions explains about 34% of regional differences in GDP per capita due to commuting (Figure 20.2).

20.1. **In 2001, there were regional differences in GDP per capita of 7% due to commuting**



20.2. **On average, 34% of the effect of commuting on GDP per capita is due to the regional type**



Statlink: http://dx.doi.org/10.1787/343772246115

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is accounted by net commuting inflows. Net commuting inflows are defined as the number of non-resident workers minus the number of residents working in other regions. Net commuting inflows are measured as the difference between employment at the place of work and employment at the place of residence.

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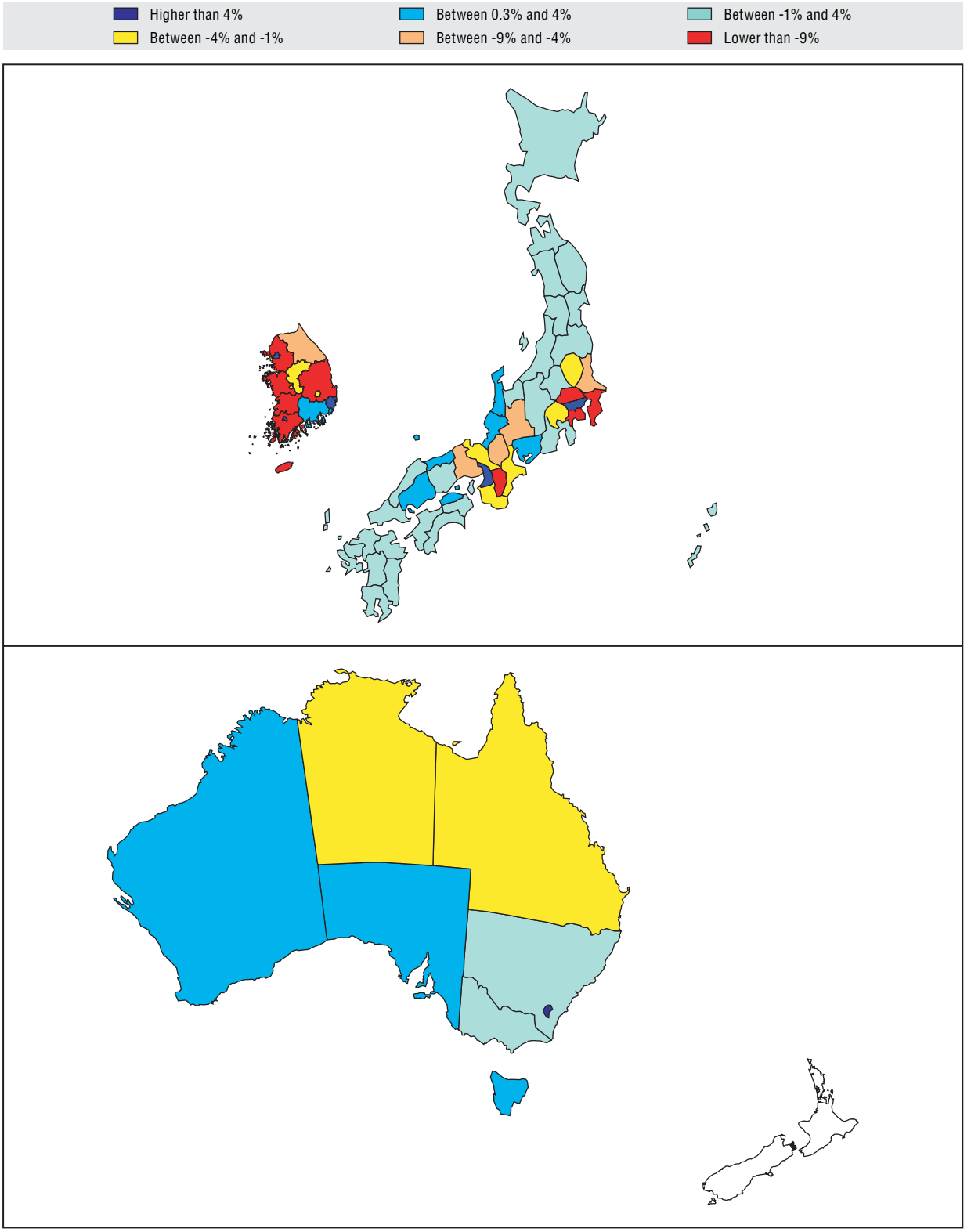
20.3. **Differences in GDP per capita due to commuting: Asia TL3 and Oceania TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

20.4. **Differences in GDP per capita due to commuting: Europe TL3**

Percentage difference from national GDP per capita 2001

Source: OECD Territorial Database.

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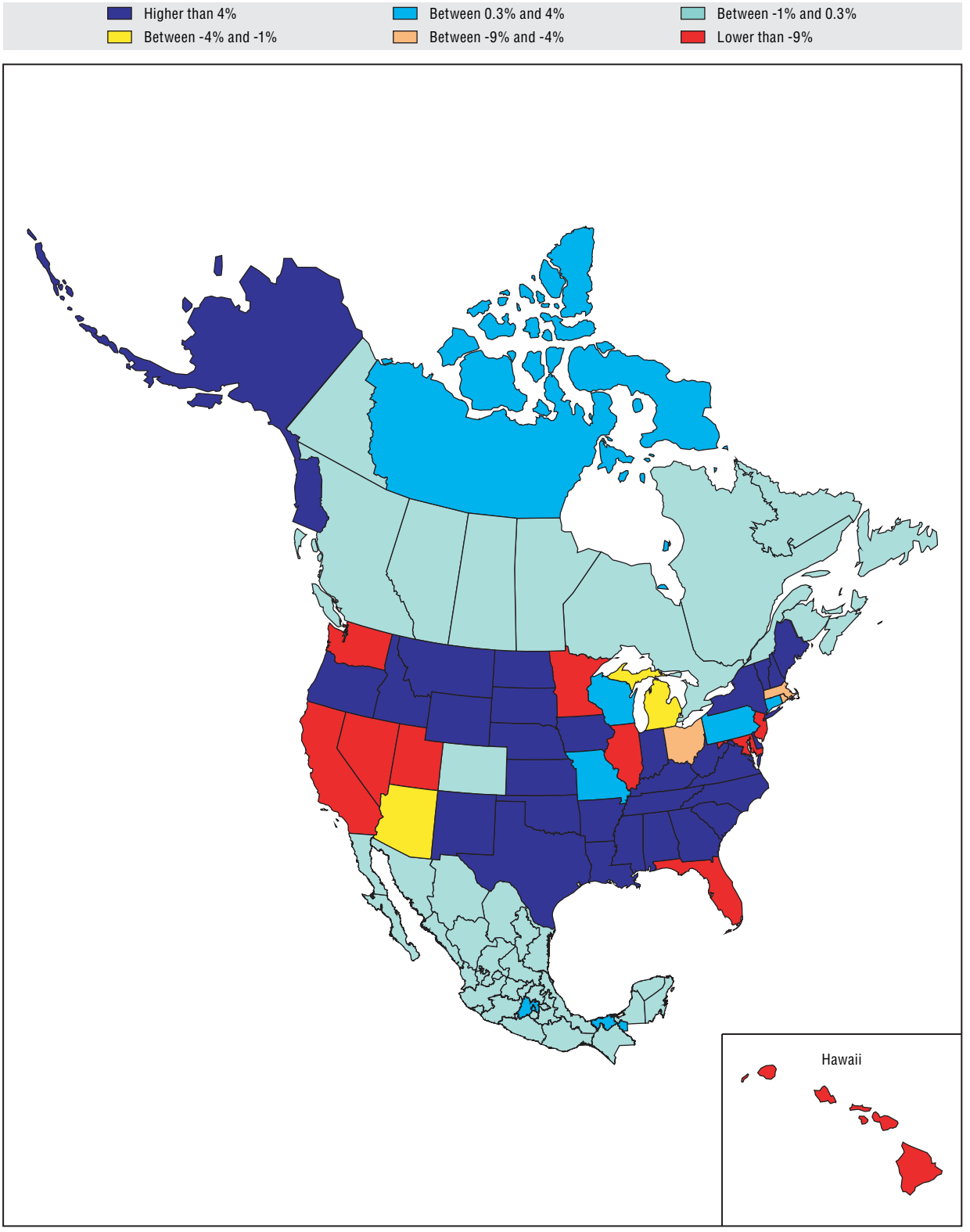
20.5. **Differences in GDP per capita due to commuting: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

21. Labour force participation

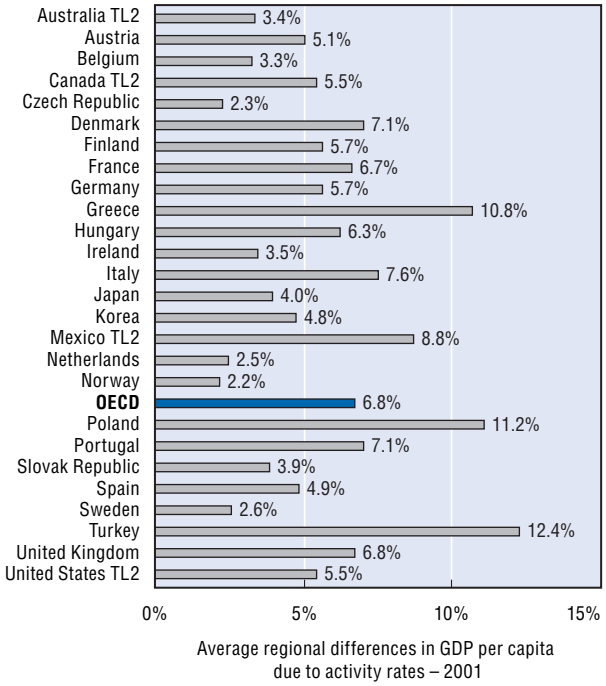
A significant part of regional differences in GDP per capita is due to differences in activity rates, *i.e.* the ratio of the labour force to the population. Differences in activity rates may be due to age as well as to the opportunity costs of entering the local labour market. Therefore, the stronger the incentives provided by the regional labour market, the higher the activity rate, other things being equal.

Figure 21.1 shows the extent to which regional differences in GDP per capita are due to activity rates. On average in 2001, activity rates accounted for regional differences of 7 percentage points.

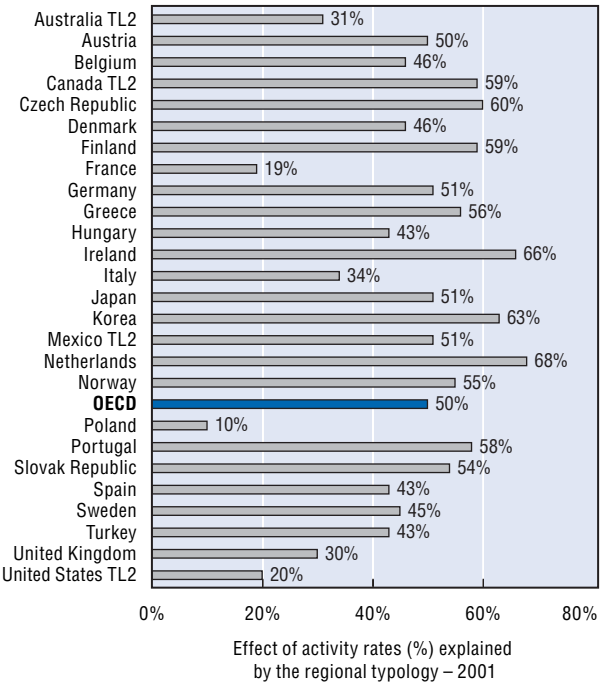
The difference was considerably larger in Greece, Poland and Turkey, where it was above 10 percentage points. The effect of activity rates was much smaller in the Czech Republic and Norway (2%).

Labour force participation is very much affected by the economic incentives provided by the local labour market, and activity rates tend to vary with the type of regions. On average, the distinction between urban, rural and intermediate regions explains half of the regional differences in GDP per capita due to labour force participation (Figure 21.2).

21.1. **In 2001, there were differences of 7% in GDP per capita due to activity rates**



21.2. **On average, about half of the effect of specialisation on regional performances is due to the regional type**



Statlink: *http://dx.doi.org/10.1787/434457356746*

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is accounted by differences in activity rates. Activity rate is defined as the ratio between the labour force and the population. The labour force is defined as the sum of employed and unemployed persons.

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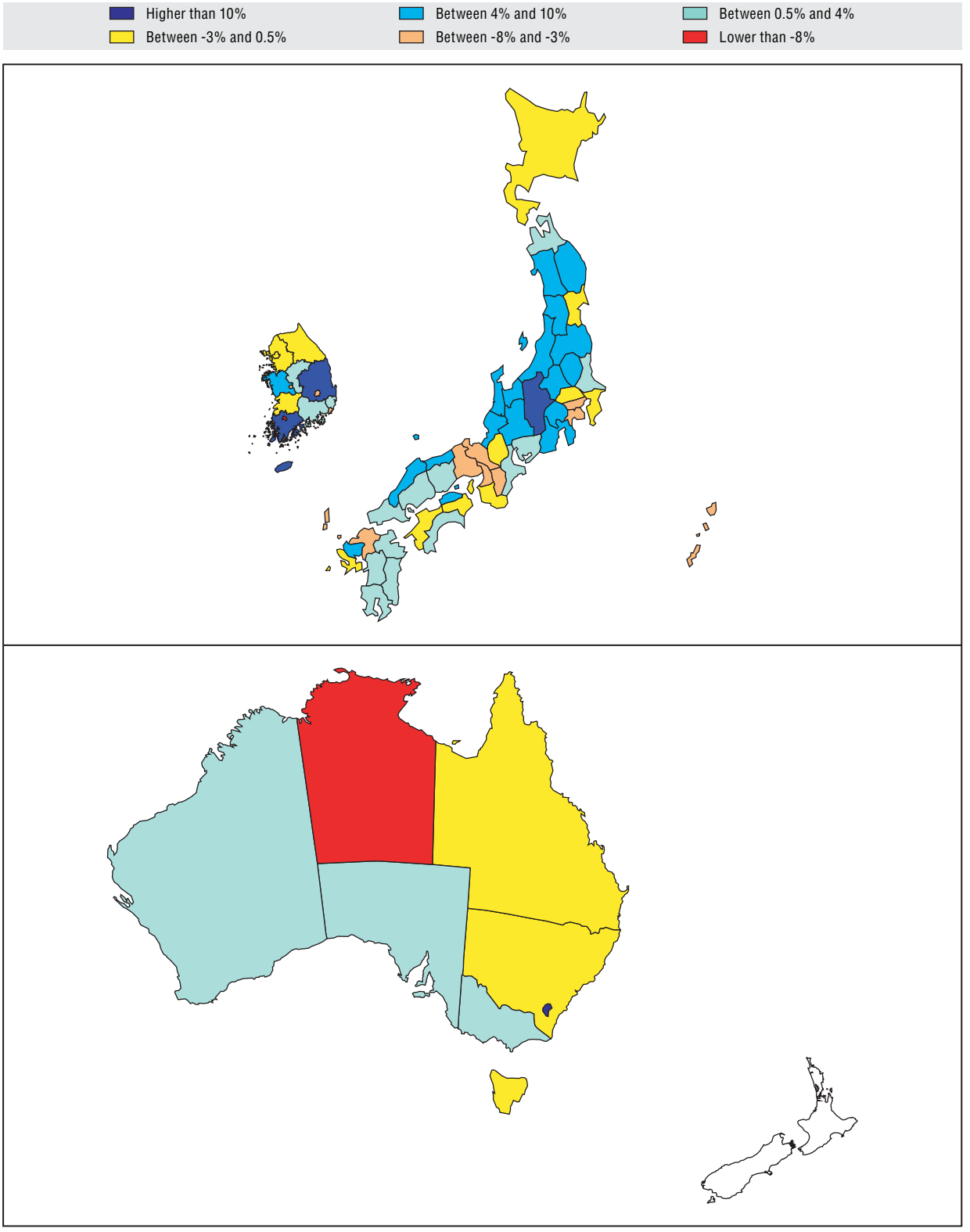
21.3. **Differences in GDP per capita due to activity rate: Asia TL3 and Oceania TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

21.4. **Differences in GDP per capita due to activity rate: Europe TL3**

Percentage difference from national GDP per capita 2001

Source: OECD Territorial Database.

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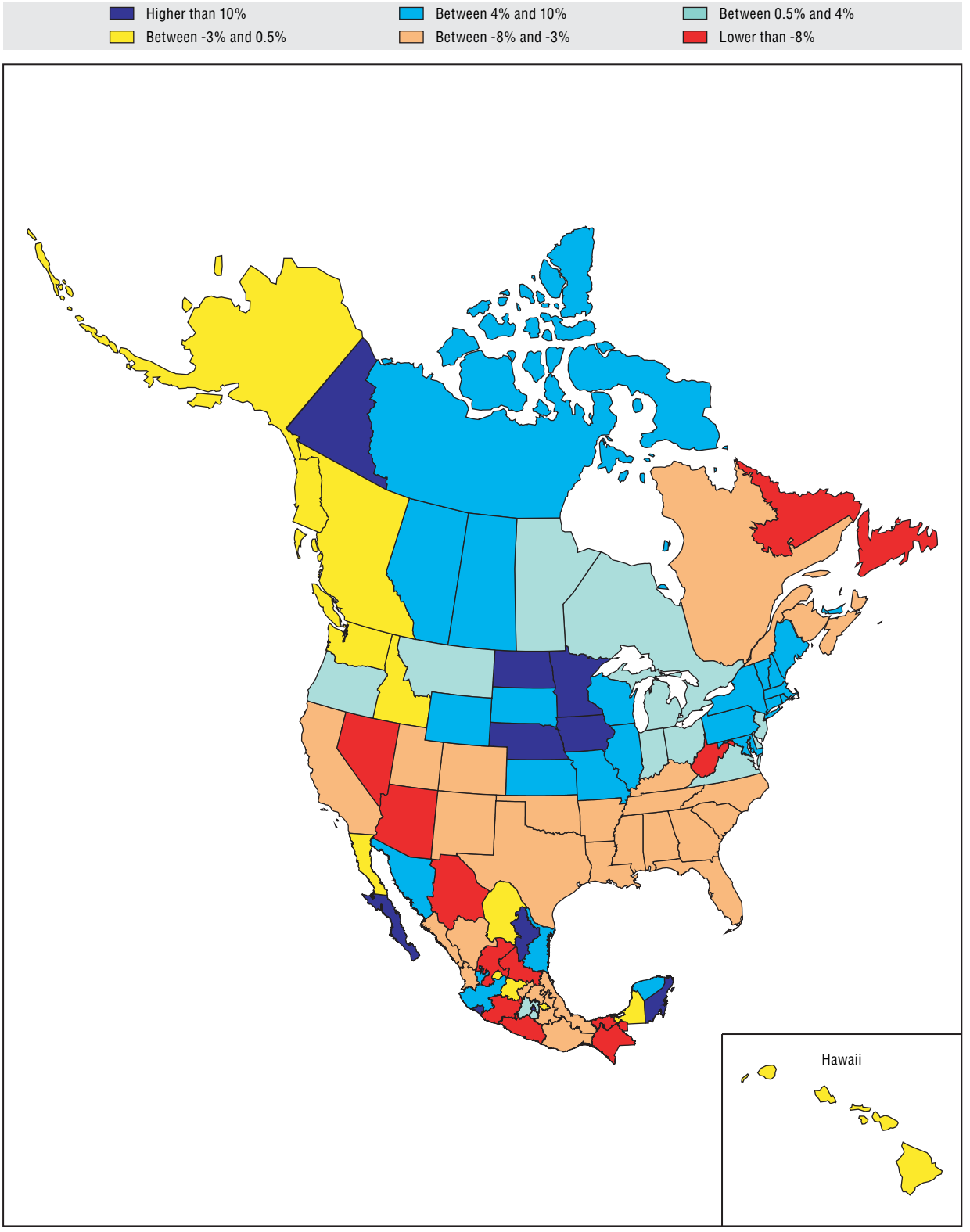
21.5. **Differences in GDP per capita due to activity rate: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

22. Ageing

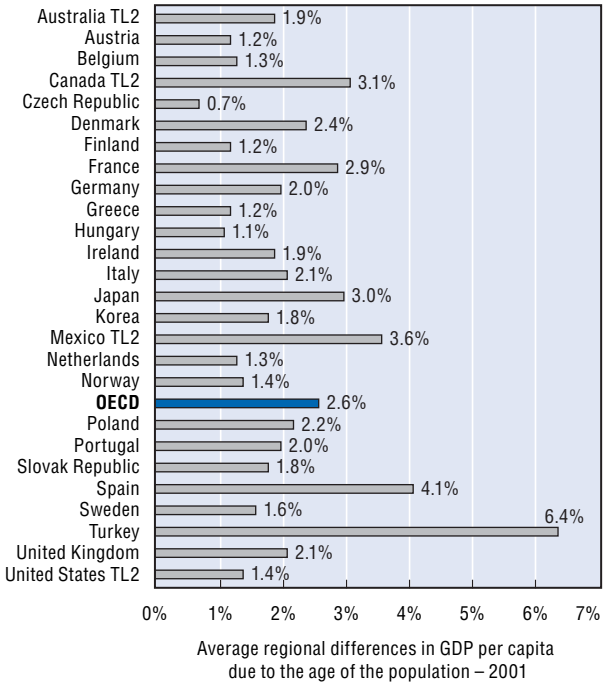
Regional differences in GDP per capita may be due to differences in the age profile of the population. As activity rates tend to be higher for young individuals than for elderly ones, the larger the proportion of young people in a region, the higher its activity rate, other things being equal.

Figure 22.1 shows the extent to which regional differences in GDP per capita are due to differences in the age profile of the population. On average in 2001, age accounted for regional differences of 2.6 percentage points.

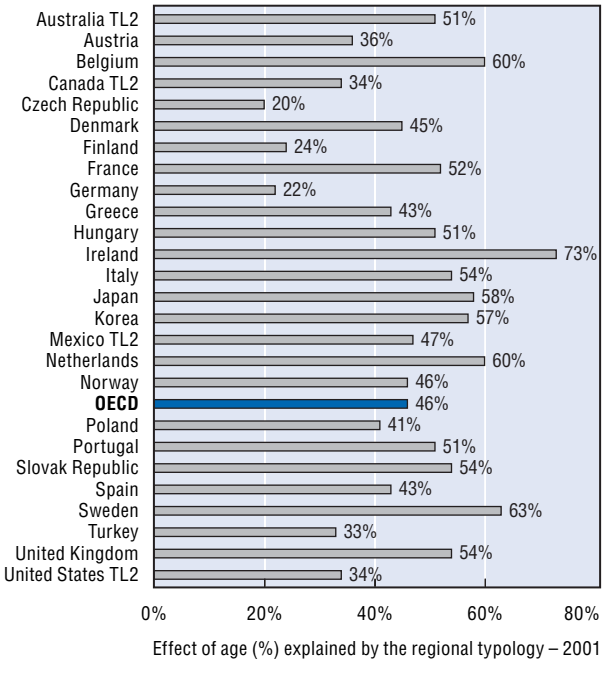
The difference was larger in Turkey (6.4%), Spain (4.1%) and Mexico (3.6%) but much smaller in the Czech Republic (0.7%).

As the elderly population tends to concentrate in rural and peripheral areas, the impact of age is likely to be more favourable in urban and intermediate regions than in rural ones. On average, the distinction between urban, rural and intermediate regions explains 46% of the regional differences in GDP per capita due to the age profile of the population (Figure 22.2).

22.1. **In 2001, there were regional differences of close to 3% in GDP per capita due to age**



22.2. **On average, 46% of the effect of age on regional performance is due to the regional type**



Statlink: *http://dx.doi.org/10.1787/621687837016*

Definition

The indicators shown in this chapter measure the percentage of regional differences in GDP per capita that is accounted by differences in the age profile of the population. The age groups considered are 0-14, 15-64 and 65 years and over.

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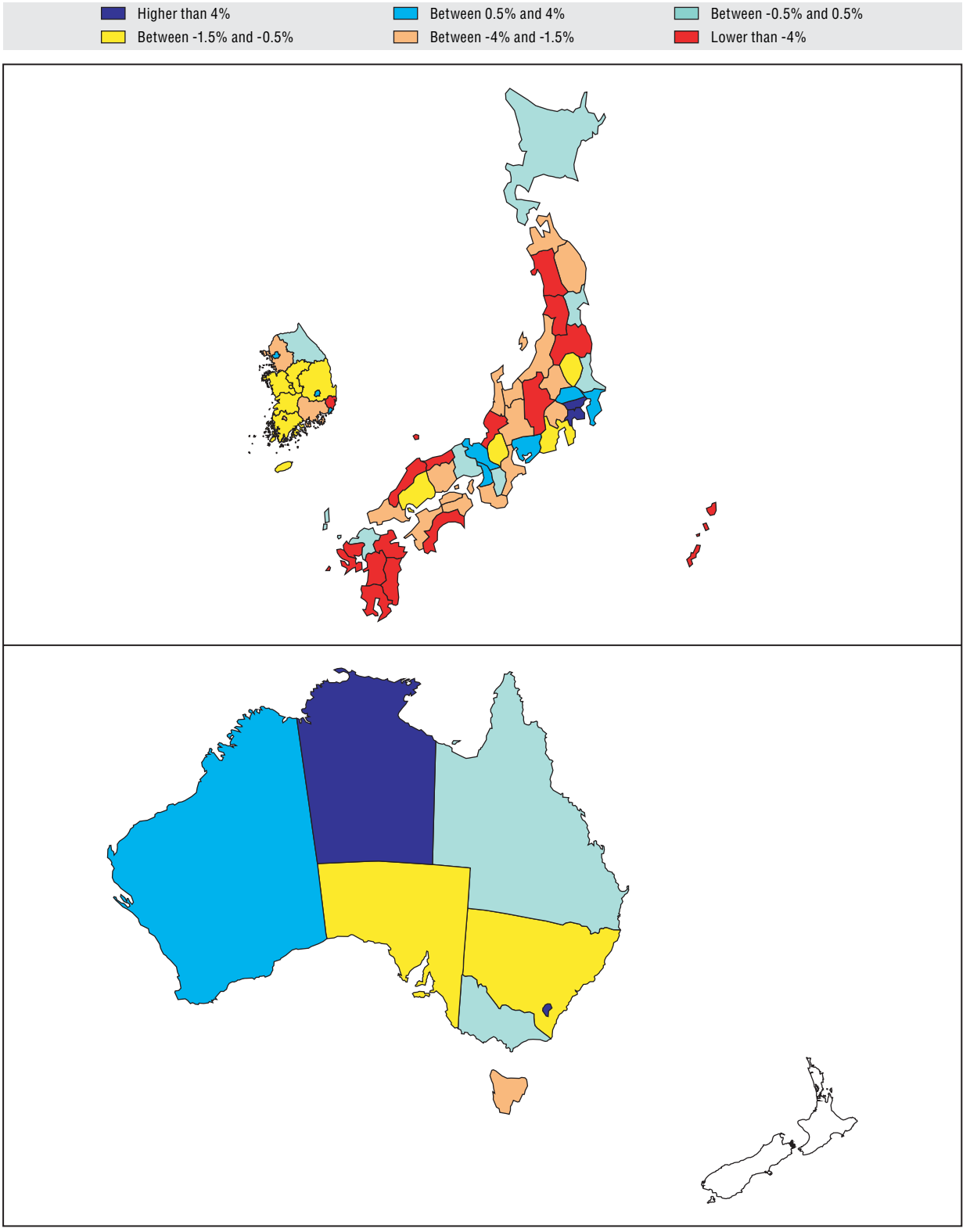
22.3. **Differences in GDP per capita due to ageing: Asia TL3 and Oceania TL2**

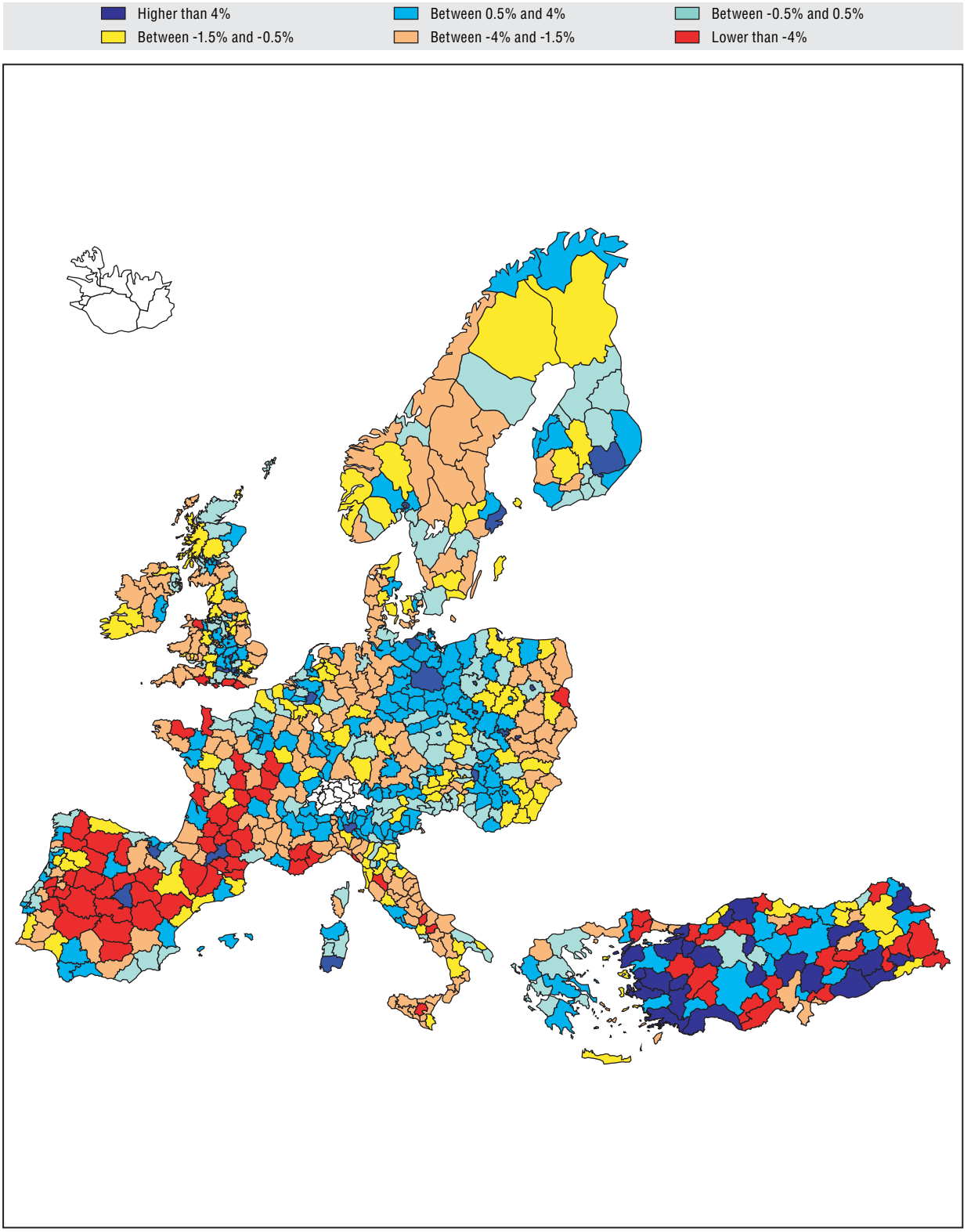
Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

22.4. **Differences in GDP per capita due to ageing: Europe TL3**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.

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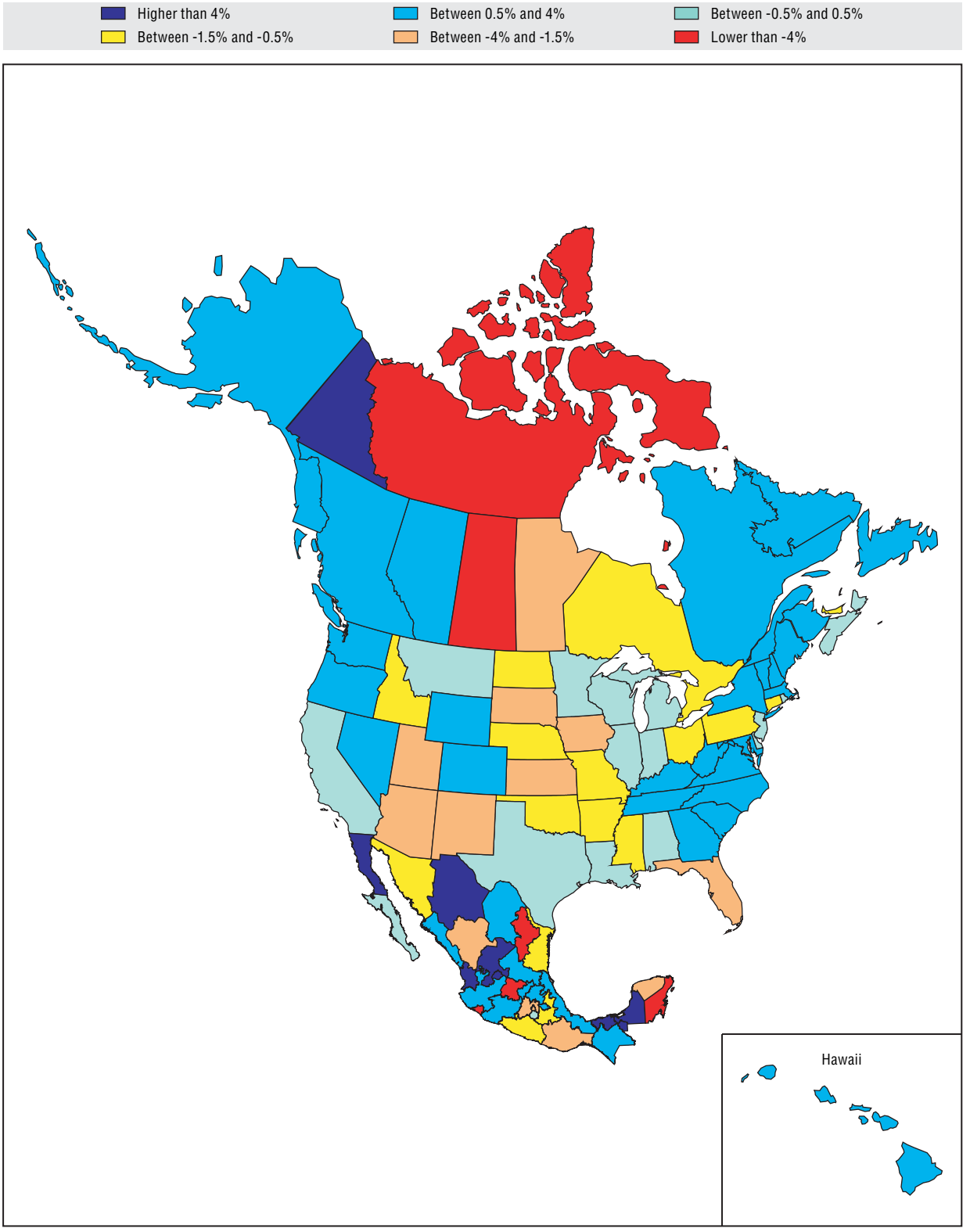
22.5. **Differences in GDP per capita due to ageing: North America TL2**

Percentage difference from national GDP per capita 2001



Source: OECD Territorial Database.