

Labour productivity, one of the main indicators of economic performance, varies significantly among OECD countries. In 2003, Luxembourg displayed the highest GDP per worker (measured at PPP in constant prices), about 47% higher than the OECD average. Turkey's productivity in 2003 was the lowest, at about 39% (Figure 9.1).

Productivity varies widely among regions

Regional differences within countries are even larger (Figure 9.2). In the United States, for instance, GDP per worker in the District of Columbia was 2.8 times higher than the national average while it was about half the national average in Montana. In Turkey, labour productivity in the region of Mus was approximately one-third of the national average, while in the region of Kocaeli it was over three times higher than the national average. A similar pattern can be observed in Mexico, Poland, France, Canada and Korea. In Denmark, Sweden, Finland and Belgium the range between the regions with the highest and lowest GDP per worker is narrower.

During 1998-2003 the gap between the region with the lowest and the highest labour productivity widened most in the United States (0.21 percentage points), Mexico and Australia (0.17), and Ireland (0.16). It decreased most in Poland (-0.40), Hungary (-0.35), Spain (-0.18), the Slovak Republic and Greece (-0.17).

While the range shows the difference between the regions with the lowest and the highest labour productivity, the Gini index measures disparities among all regions of a given country. The index ranges from 0 to 1: the higher

the value, the larger the inequality among regions in terms of GDP per worker.

Gini indexes are highest in Mexico, Turkey and the United States

The largest regional disparities in labour productivity in 2003 were found in Mexico, Turkey and the United States with a Gini index of 0.26, 0.26 and 0.20, respectively (Figure 9.3). Regional disparities above the OECD average (0.10) occurred in Korea and Canada (0.16), Poland (0.14), Ireland (0.13), Hungary and Portugal (0.12) and Slovak Republic (0.11). According to this index, the countries with the smallest disparities were Sweden and Denmark (0.04), Spain and Italy (0.05), and Norway, the Netherlands and Finland (0.06).

During 1998-2003, the Gini index increased the most in Australia, Ireland and Canada (0.03), and in Korea (0.02); it decreased the most in Poland (-0.05), the Slovak Republic and Spain (-0.02).

A half of workers are in low productivity areas

To appreciate the economic implications of this pattern, Figure 9.4 depicts the percentage of workers employed in regions where productivity is below the national average. This reveals the share of the national workforce that is affected by regional disparities in labour productivity. In 2003, 50% of all OECD workers were employed in regions where productivity is below the national average.

The percentage was particularly high in Greece (89%), Canada (88%), Korea (82%), Mexico (68%), the Czech Republic (63%) and Denmark (62%). In contrast, in Japan, Finland, Austria, Portugal, Australia, Sweden and Ireland, less than 35% of the workforce was employed in regions of low productivity

Definition

Labour productivity is defined as the ratio of constant GDP, measured in 2000 prices, to employment, where the latter is measured at the place of work.

9. REGIONAL DISPARITIES IN LABOUR PRODUCTIVITY

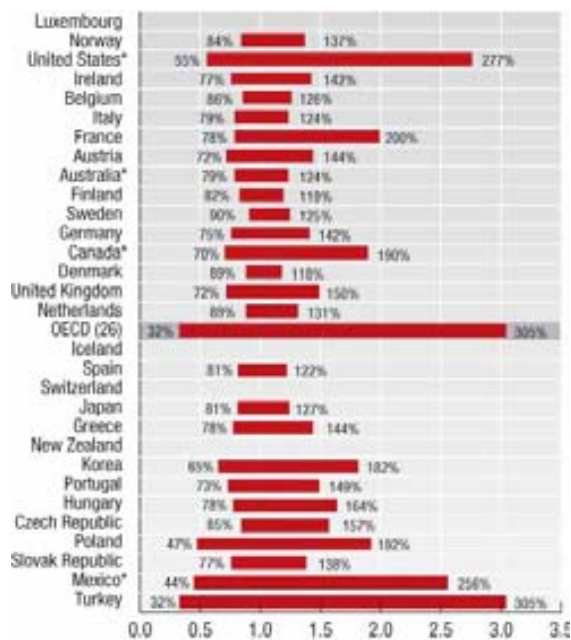
9.1. Labour productivity varies significantly among OECD countries...

GDP per worker (USD constant PPP year 2000)



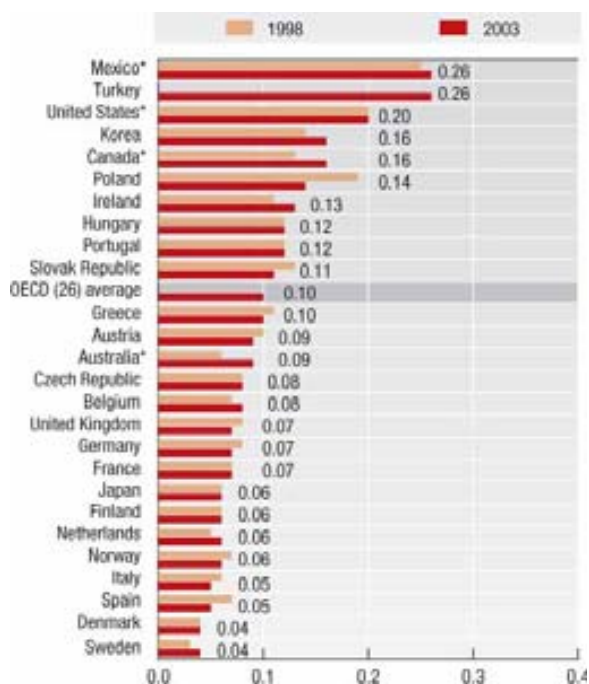
9.2. ... but disparities in productivity are even larger among regions

Range in GDP per worker across regions, as a per cent of national GDP per worker, 2003 (TL3)



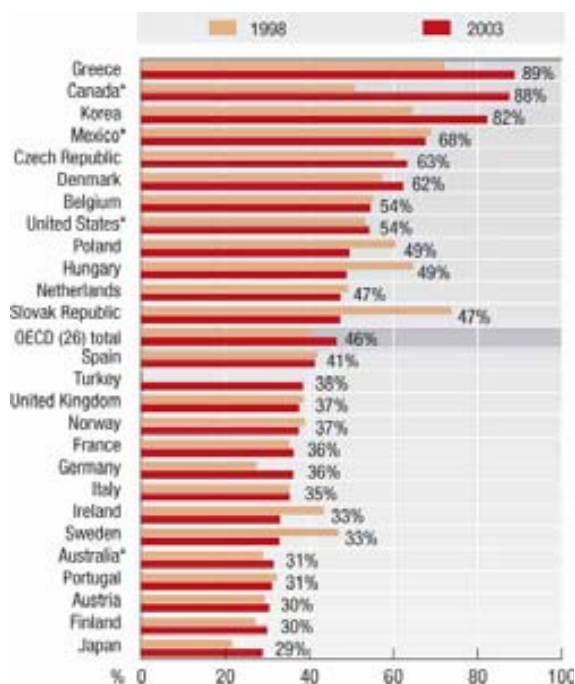
9.3. In 2003 the largest regional disparities in GDP per worker were in Mexico, Turkey and the United States

Gini index of inequality of GDP per worker (TL3)



9.4. 50% of all OECD workers are employed in regions where GDP per worker is below the national average

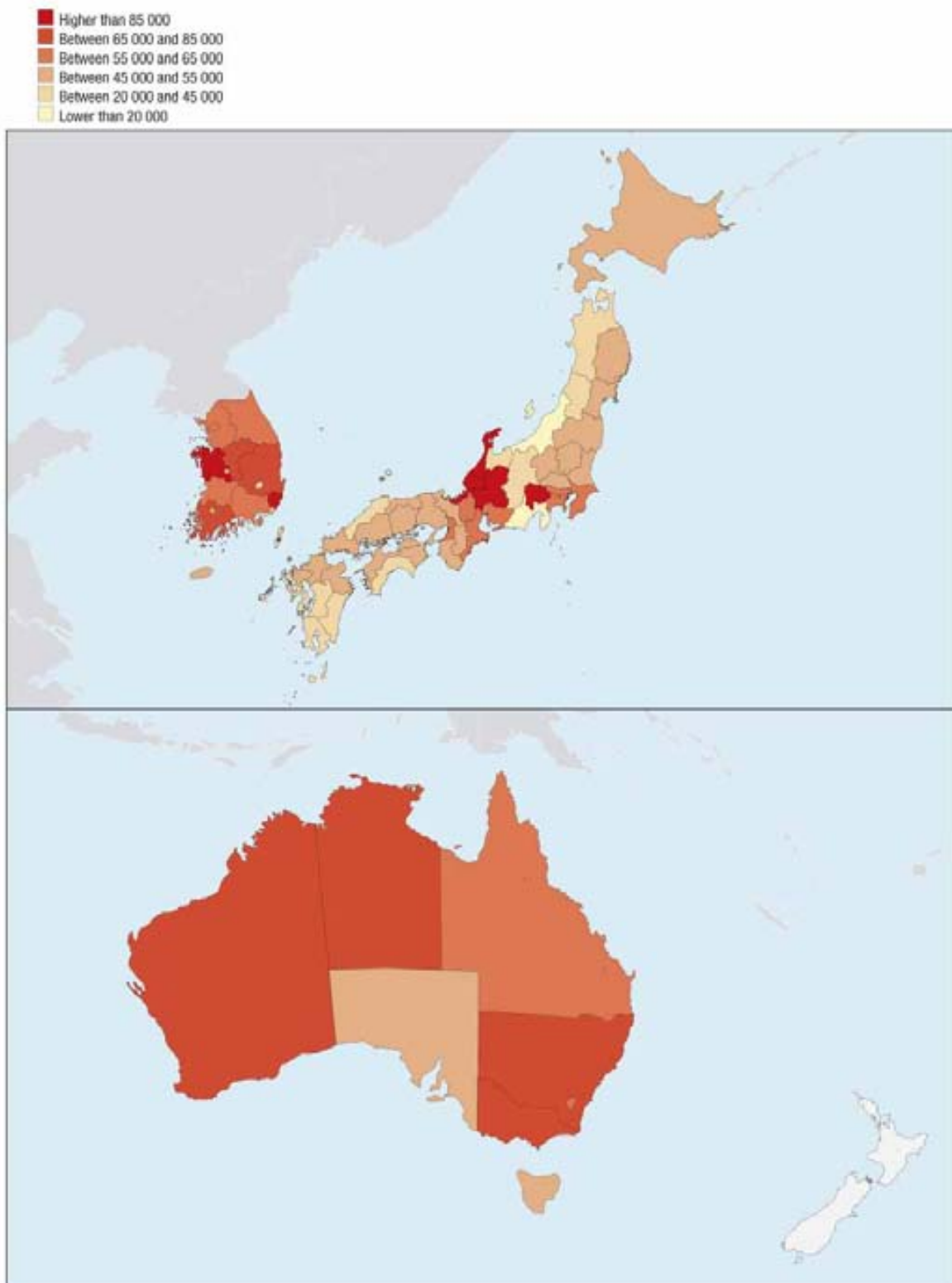
Per cent of workers in regions with GDP per worker below the national average (TL3)




StatLink <http://dx.doi.org/10.1787/301371836530>

9.5. Regional productivity: Asia and Oceania

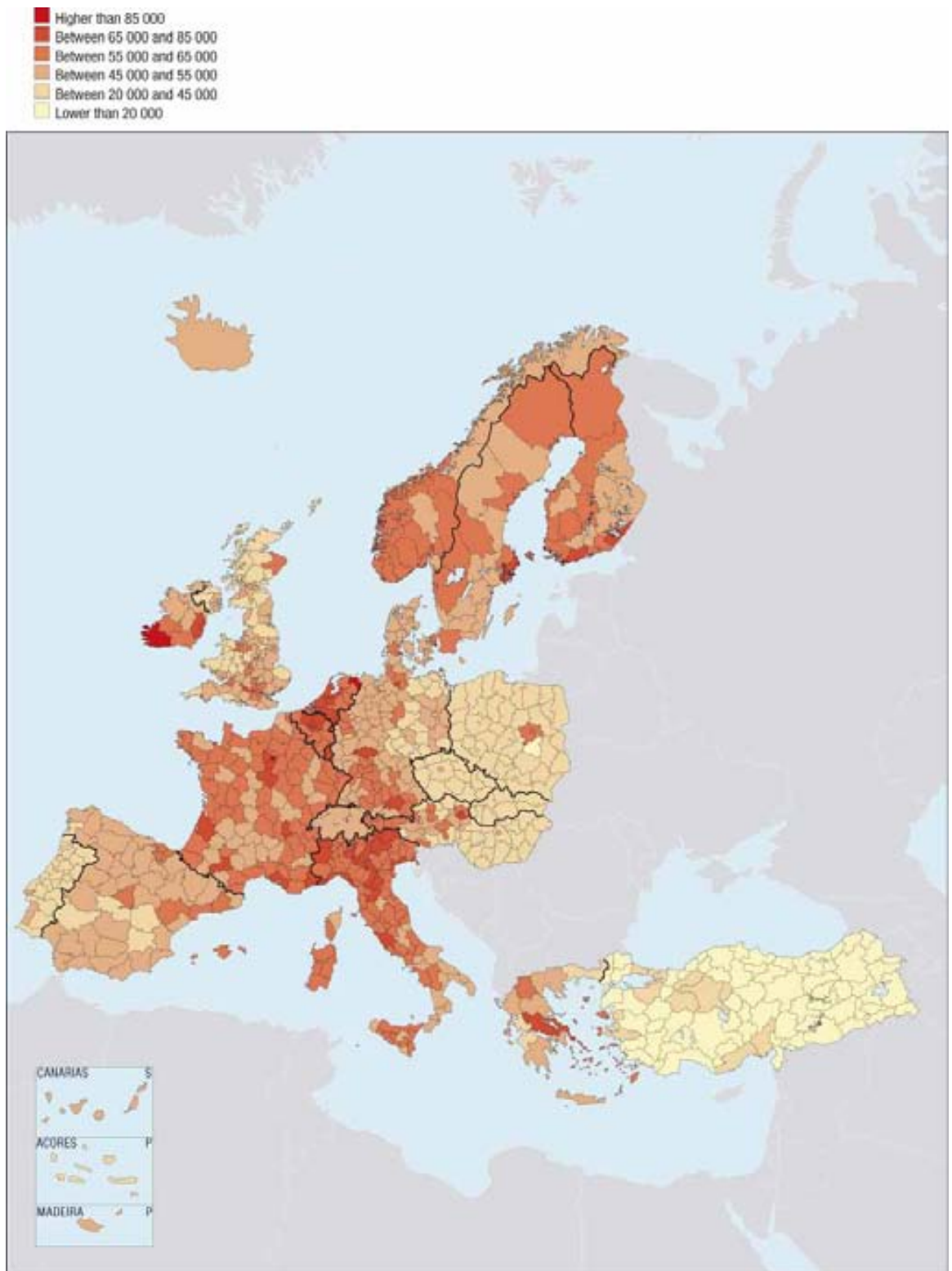
Regional GDP per worker in constant 2000 USD (PPP), 2003



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9.6. Regional productivity: Europe

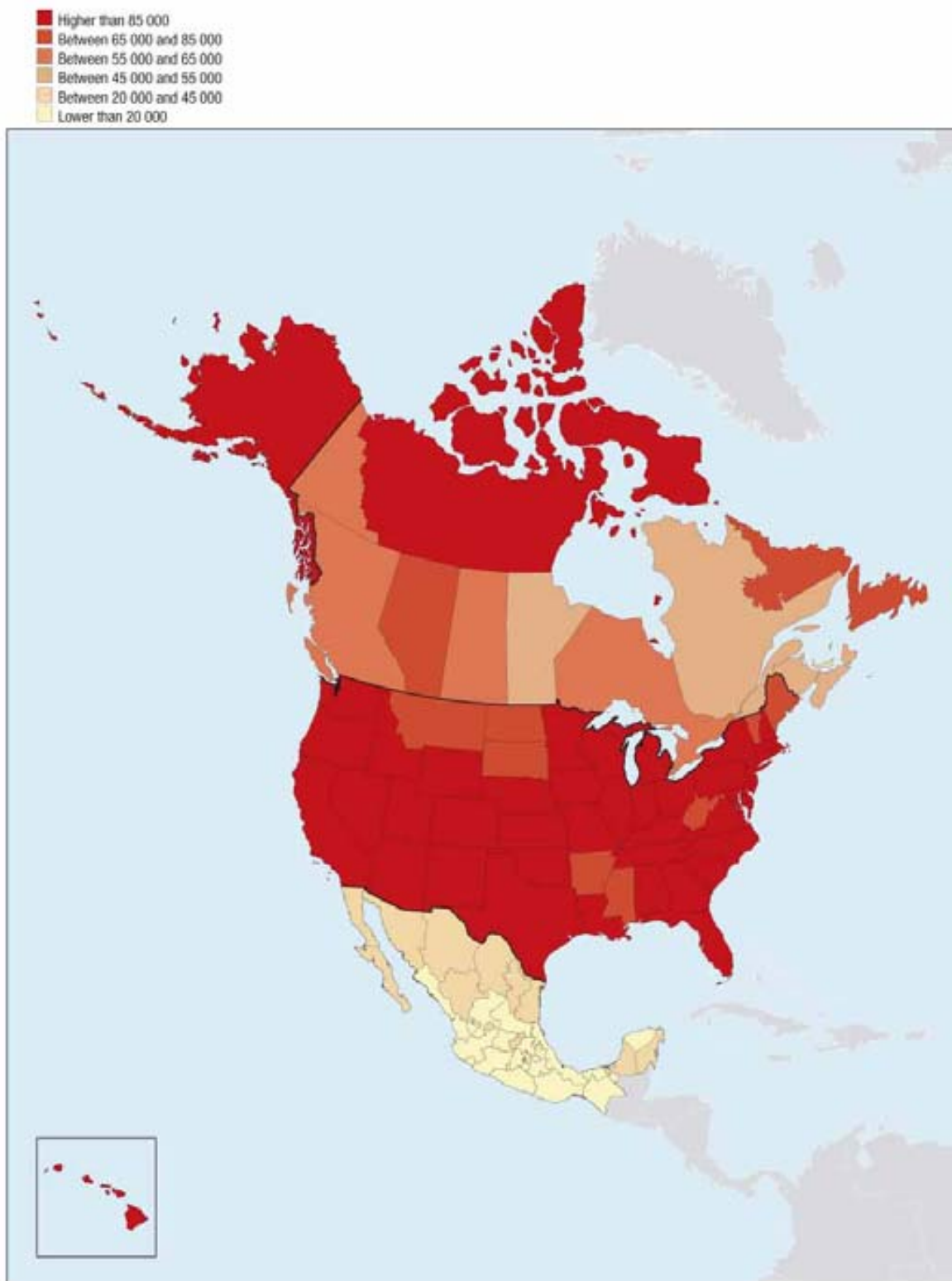
Regional GDP per worker in constant 2000 USD (PPP), 2003




StatLink  <http://dx.doi.org/10.1787/800723772272>

9.7. Regional productivity: North America

Regional GDP per worker in constant 2000 USD (PPP), 2003



StatLink  <http://dx.doi.org/10.1787/800723772272>

Regional labour productivity growth is the key to raising living standards

Growth in GDP per worker is often used as the key indicator to assess regional competitiveness. The growth potential in the long run depends on the ability to raise output per worker over prolonged periods of time.

During 1998-2003, labour productivity in OECD regions increased at an average annual rate of 1.9% (Figure 9.8), ranging from a 5.3% annual decline in the Norwegian region of Vest-Agder to an increase of 16.4% in the Hungarian region of Pest. Except in Norway, regional labour productivity growth increased on average in all countries during the period.

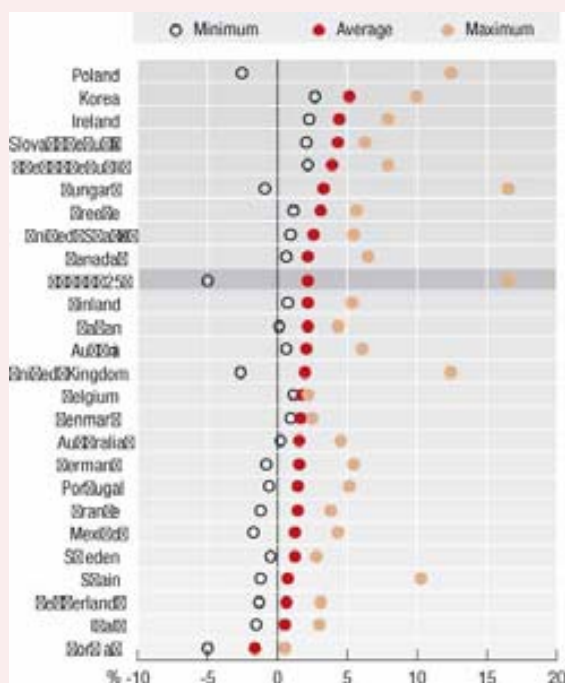
Increases in labour productivity are most desirable when they occur through a simultaneous increase in the rate of employment and in GDP. If, on the other hand, they occur through a reduction in the rate of employment, they will not be sustainable in the long run since tax revenue will fall and demand for income support (such as unemployment benefits) will rise.

Figure 9.9 displays the correlation between growth in the rate of employment and in labour productivity. When growth in productivity is accompanied by an increase in the employment rate the correlation is positive; when productivity growth is spurred by reductions in employment, the correlation is negative.

The correlation coefficient is negative and statistically significant only in Australia, the Czech Republic, Greece, Hungary, Korea and Italy. In these countries, regions seem to have achieved higher productivity at the cost of lower employment. In all other countries, the correlation is not statistically significant, suggesting that some regions have been able to raise both productivity and employment while others have only increased productivity through employment reduction. This pattern raises questions about the capacity of such regions to sustain productivity growth over a prolonged period of time.

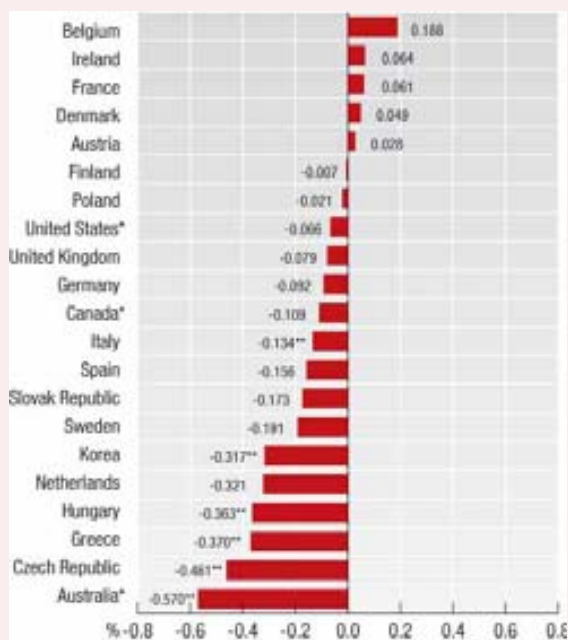
9.8. Productivity growth varies significantly among OECD regions

Annual growth in GDP per worker, 1998-2003 (TL3)



9.9. The correlation between growth in GDP and in employment is significantly negative in six OECD countries

Spearman correlation between employment rate growth and labour productivity growth, 1998-2003 (TL3)



* 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

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

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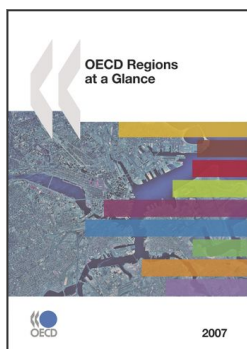
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