

Where productivity gains are happening

Regions with the highest productivity in the country (known as ‘frontier regions’) play a central role in productivity growth and in the process of diffusing productivity gains within the country. A better understanding of the profiles of lagging regions and of how they can catch up is key to achieving inclusive growth. Between 1995 and 2013, the labour productivity in frontier regions increased by a yearly average of 1.6% compared to 1.3% for the lagging regions, widening the regional productivity gap by around 50%, from USD 21 000 to USD 31 000. This suggests that lagging regions benefit only partially from the growth of frontier regions. After the economic crisis of 2008, the gap stabilised, mainly due to the slowdown of productivity growth in the frontier regions (Figure 2.36).

Definition

Labour productivity is measured by GDP per employee, with the employment defined by the place of work. Regional GDP is measured according to the definition of the System of National Accounts (SNA 2008). To make comparisons over time and across countries, it is expressed at constant prices (year 2010), using the OECD deflator and then it is converted into USD purchasing power parities (PPPs) to express each country’s GDP in a common currency.

Frontier and lagging regions are the top and bottom 10% of regions in GDP per employee which are defined as those with the highest/lowest GDP per employee until the equivalent of 10% of national employment is reached.

A TL2 region is considered mostly rural if less than half of its population lives in a functional urban area and mostly urban if the more than 70% of its population lives in a functional urban area.

The Malmquist index allows the decomposition of the productivity growth of a region between two effects, the frontier shift effect which is the change of regional productivity related to the gain of productivity of the frontier, and the catch-up effect which is the acceleration of the productivity of the region towards the frontier (see Annex C for details).

Frontier and lagging regions have a clear differentiation in terms of typology: regions that are mostly urban dominate the composition of the frontier with a share of 70%, whereas 60% of mostly rural regions are among the lagging regions, due in particular to the low dynamism of remote rural regions (Figure 2.37). The gap in productivity can be mainly explained by economies of agglomeration which benefit large cities. At the same time, some mostly urban regions containing large cities are lagging in productivity, like Florida (United States) and Gyeongbuk region (Korea).

When labour productivity growth is split into an effect related to the gains in the frontier regions and an effect specific to the productivity gains of the region towards its national frontier (catching-up effect), regions show a high connection between these two effects. In general, among the 20 regions with highest productivity growth, a dynamic frontier effect in the country fosters the regional catching-up (Figure 2.38). Exceptions are found in North Dakota and Wyoming (United States) or Groningen (Netherlands) where the productivity gains are mostly due to the catching-up effect.

On the other hand, among the regions with negative productivity, which are not catching-up with the rest of the country, the country-specific frontier shift effect is negative or weak; thus these regions have not benefitted from productivity gains at the frontier (Figure 2.39).

Source

OECD (2015), *OECD Regional Statistics* (database), <http://dx.doi.org/10.1787/region-data-en>.

Reference years and territorial level

2.36: 1995-2013; TL2.

2.37-2.39: 2000-13; TL2.

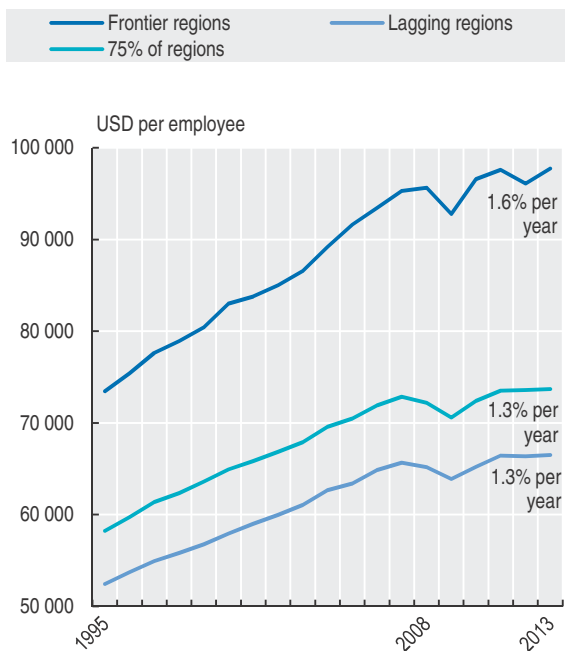
Regional GDP is not available for Iceland, Israel and Turkey.

Figure notes

2.36-2.37: Averages of frontier and lagging regions of 19 OECD countries for which regional data are available over the period. For EU countries, labour productivity data as from 1995 has been estimated by linking SNA1993 and SNA2008 data.

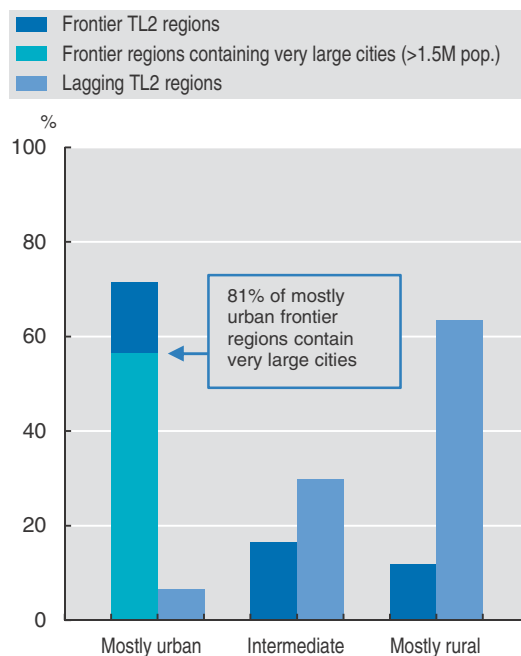
Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

2.36. Productivity growth gap between frontier and lagging regions, 1995-2013 (TL2)



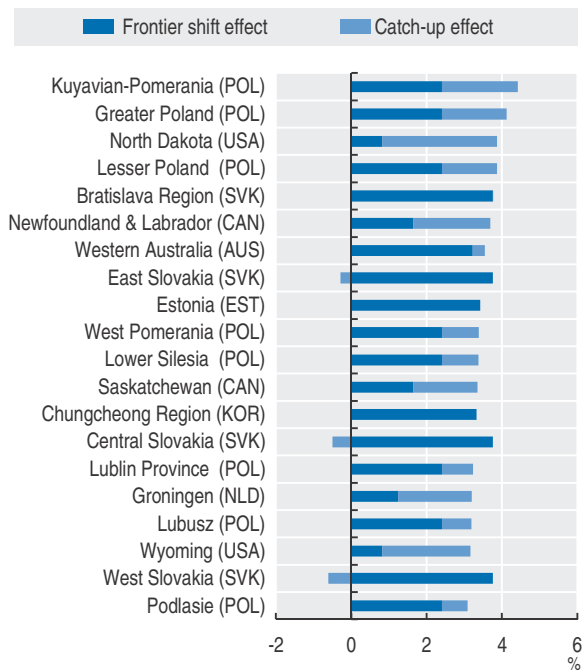
StatLink <http://dx.doi.org/10.1787/888933363332>

2.37. Share of regions belonging to frontier and lagging regions by typology, 2013 (TL2)



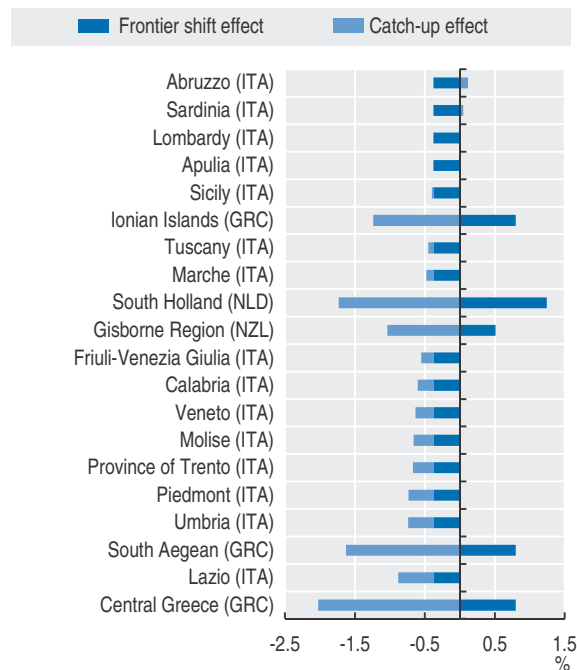
StatLink <http://dx.doi.org/10.1787/888933363334>

2.38. Decomposition of productivity growth between frontier shift and catch-up effect, top 20 regions, 2000-13

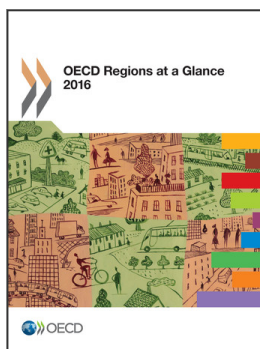


StatLink <http://dx.doi.org/10.1787/888933363353>

2.39. Decomposition of productivity growth between frontier shift and catch-up effect, bottom 20 regions, 2000-13



StatLink <http://dx.doi.org/10.1787/888933363365>



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