

What accounts for variations in spending on salary costs?

- Similar levels of expenditure among countries in primary and secondary education can mask a variety of contrasting policy choices. This helps to explain why there is no simple relationship between overall spending on education and the level of student performance.
- Salary cost per student at upper secondary level of education varies significantly between countries, from USD 528 in Chile to more than 10 times that in Luxembourg, Spain and Switzerland.
- The higher the level of education, the greater the impact of teachers' salaries and the lower the impact of class size on salary cost per student as a percentage of GDP per capita.

Significance

The relationship between resources devoted to education and outcomes has been the focus of much interest in recent years, as governments seek to ensure value for money in public spending while satisfying the education needs of society and the economy. Indeed, various reforms have been implemented during the last decade in primary and secondary education which have had important impacts in this area (see Box B7.2 in *Education at a Glance* 2010). Consequently, there is considerable interest in international comparisons of how various school systems allocate resources. This spread examines these questions from the perspective of salary cost per student – a calculation based on four factors: hours students spend in the classroom, teachers' teaching hours, estimated class size and teachers' salaries. Salary cost per student is calculated for each country and then compared with the OECD average.

Findings

Salary cost per student is a complex calculation based, as noted above, on four factors. To give a concrete example of how these factors interact, consider Spain in the top chart on the opposite page. The salary cost per student at upper secondary level of education there is USD 2 481 higher than the OECD average. This is because Spain has higher teachers' salaries (+ USD 369) than the OECD average, annual instruction time for students close to the average (– USD 23) and above-average teaching time for teachers (– USD 259). However these effects are dampened by significantly smaller class sizes (+ USD 2 394).

Overall, salary cost per student at upper secondary level varies significantly, ranging from USD 528 in Chile to more than ten times that in Luxembourg, Spain and Switzerland. But these totals need to be

understood in terms of the relative importance of each of the four factors. For example, salary cost per student is USD 3 913 in Japan, similar to the United Kingdom's USD 3 937, both of which are above the OECD average. However, in Japan the total is driven by the fact that teachers have below-average teaching time while in the United Kingdom the key factor is smaller class size.

Naturally, teachers' salaries vary according to countries' relative level of wealth. For that reason, it can be useful to compare salary cost per student in terms of GDP per capita (see Chart B7.3 in *Education at a Glance* 2010). On average in OECD countries, the salary cost per student at upper secondary level represents 10.9% of GDP per capita, but reaches as high as 20.1% in Spain.

Differences between countries are largest at the upper secondary level of education and smaller at lower levels of education. This is most obvious in countries where salary cost per student (as a percentage of GDP per capita) is furthest from the OECD average. By contrast, differences between country totals and the OECD average generally increase at lower levels of education.

Definitions

Values for variables are derived mainly from *Education at a Glance* 2009, and refer to the school year 2006-07 and the calendar year 2006 for indicators related to finance. To compensate for missing values, some data have been estimated on the basis of data published in previous editions of *Education at a Glance* while others have been replaced by the average for all OECD countries. Salary cost per student is calculated based on the salary of teachers, the number of hours of instruction for students, the number of hours of teaching for teachers and a proxy class size.

Going further

For additional material, notes and a full explanation of sourcing and methodologies, see *Education at a Glance* 2010 (Indicator B7).

Areas covered include:

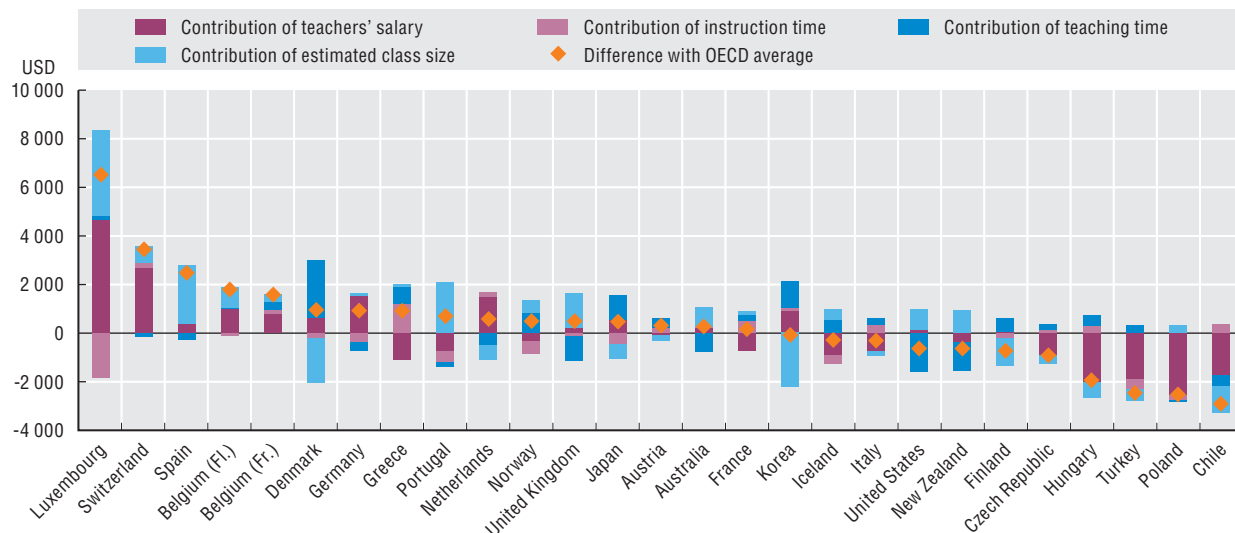
- Salary cost per student by levels of education.
- Salary cost per student as a percentage of GDP per capita.

3. PAYING FOR EDUCATION

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Figure 3.14. **Contribution of various factors to salary cost per student at upper secondary level, 2006**

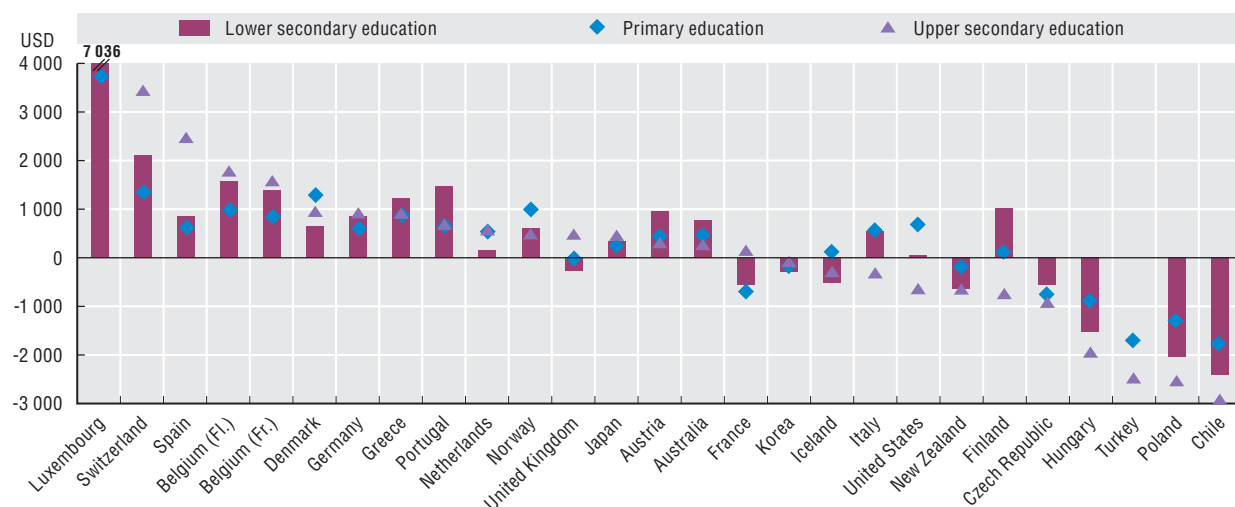
This figure shows the contribution (in US dollars) of the four factors that affect differences between salary cost per student and compares each country's total with the OECD average.



Source: OECD (2010), *Education at a Glance 2010*, Table B7.3, available at <http://dx.doi.org/10.1787/888932310396>.

Figure 3.15. **Differences in salary cost per student by level of education, 2006**

This figure shows the difference between the salary cost per student as a percentage of GDP per capita and the OECD average for each level of education.



Source: OECD (2010), *Education at a Glance 2010*, Tables B7.1, B7.2 and B7.3, available at <http://dx.doi.org/10.1787/888932310396>.



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