

3. PAYING FOR EDUCATION

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 explains why there is no simple relationship between overall spending on education and the level of student performance.
- Salary cost per student at the upper secondary level of education varies significantly between countries, from USD 539 in Chile to nearly 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.

Significance

The relationship between resources devoted to education and outcomes achieved has been the focus of much education policy debate in recent years, as governments seek to ensure value for money in public spending while satisfying the educational needs of the society and economy. Indeed, various reforms implemented during the last decade in primary and secondary education 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. Spain serves as a concrete example of how these factors interact (see the top chart on the opposite page). Its salary cost per student in upper secondary education is USD 2 201 higher than the OECD average. Spain spends more on teachers' salaries than the OECD average (+USD 686) and spends more on instruction time for students (+USD 94), but lowers relative costs thanks to above-average teaching time for teachers (–USD 291). However, these effects are dampened by significantly smaller class sizes (+USD 1 711), resulting in above-average salary cost per student.

Overall, salary cost per student at the upper secondary level varies significantly, ranging from USD 539 in Chile to nearly ten times that in Luxembourg, Spain and Switzerland. But these totals need to be interpreted in terms of the relative importance of each of the four factors. For example, salary cost per student is USD 5 044 in Denmark, close to the same salary cost in Portugal (USD 4 886), both of which are above the OECD average. However, in Denmark the total is driven by the fact that teachers have below-

average teaching time while in Portugal 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 Tables B7.1 to B7.3, available only online, in *Education at a Glance 2011*). On average in OECD countries, the salary cost per student at upper secondary level represents 10.3% of GDP per capita, but reaches as high as 21.6% in Portugal.

High levels of per-student spending cannot be automatically equated with strong performance by education systems. Globally, only 17% of the variation in 2009 PISA performance in reading literacy results from a variation in cumulative spending per student (between the ages of 6 and 15). Whereas the four countries with the lowest average scores in reading literacy (Brazil, Chile, Mexico and the Russian Federation) also have the lowest levels of cumulative spending per student, the four top-performing countries (Canada, Finland, Korea and New Zealand) are not among countries with the highest levels of cumulative expenditure per student. On the contrary, the four countries with the highest levels of cumulative spending per student (Austria, Luxembourg, Norway and Switzerland) have an average score in reading literacy ranging from slightly above the OECD average (Norway and Switzerland) to well below the OECD average reading score (Austria and Luxembourg).

Definitions

Values for variables are derived mainly from *Education at a Glance 2010*, and refer to the school year 2007-08 and the calendar year 2007 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 teachers' salaries, 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 2011* (Indicator B7).

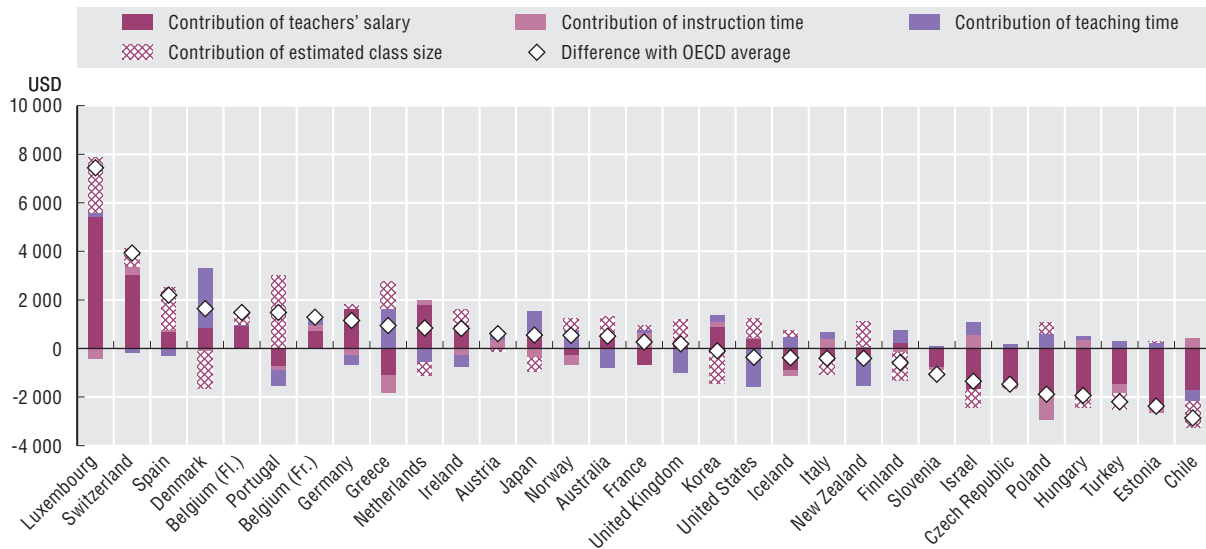
Areas covered include:

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

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Figure 3.13. Contribution of various factors to salary cost per student at upper secondary level, 2008

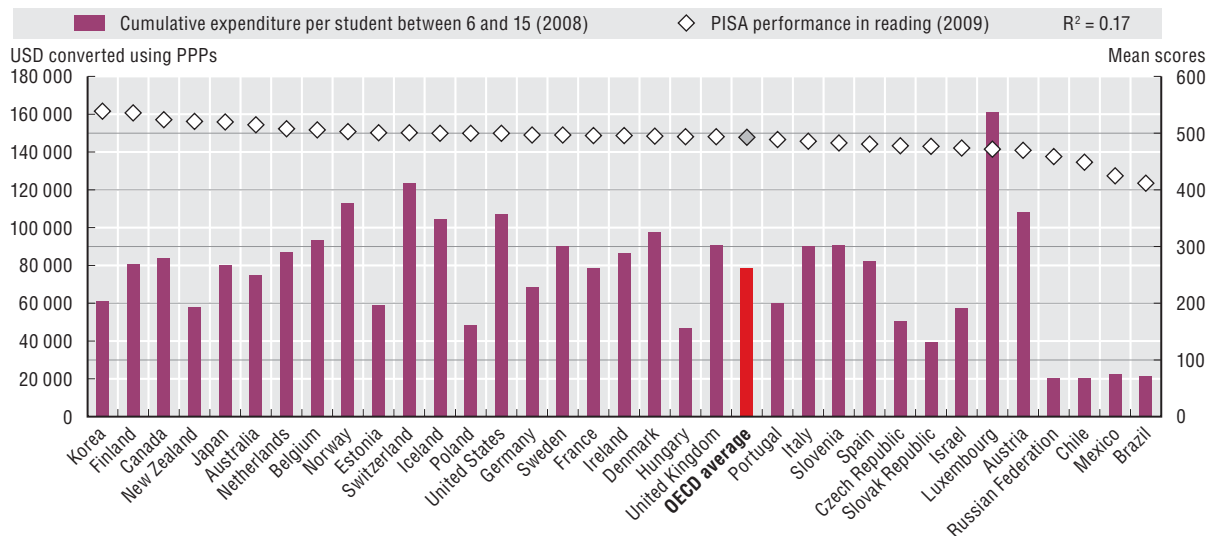
This figure shows the contribution (in US dollars) of the four factors that affect differences between salary cost per student and compares each country's total with the OECD average.



Source: OECD (2011), Education at a Glance 2011, Table B7.3, available at <http://dx.doi.org/10.1787/888932464220>.

Figure 3.14. Relationship between student reading performance (2009) and spending (2008)

This figure shows the relationship between PISA performance in reading at age 15 and cumulative spending per student between 6 and 15.



Source: OECD (2011), Education at a Glance 2011, Chart B7.2, available at <http://dx.doi.org/10.1787/888932461332> and OECD, PISA 2009 Database.



From:
Education at a Glance 2011
Highlights

Access the complete publication at:
https://doi.org/10.1787/eag_highlights-2011-en

Please cite this chapter as:

OECD (2011), "What accounts for variations in spending on salary costs?", in *Education at a Glance 2011: Highlights*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/eag_highlights-2011-28-en

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