

## WHICH FACTORS INFLUENCE THE LEVEL OF EXPENDITURE?

This indicator examines the policy choices countries make when investing their resources in primary and secondary education, such as trade-offs between the hours that students spend in the classroom, the number of teaching hours of teachers, class sizes (proxy measure) and teachers' salaries. In the first stage, the differences in the combination of factors that influence the salary cost per student are analysed separately at primary, lower secondary and upper secondary levels of education. In the second stage, the differences in salary cost per student between these levels of education are compared.

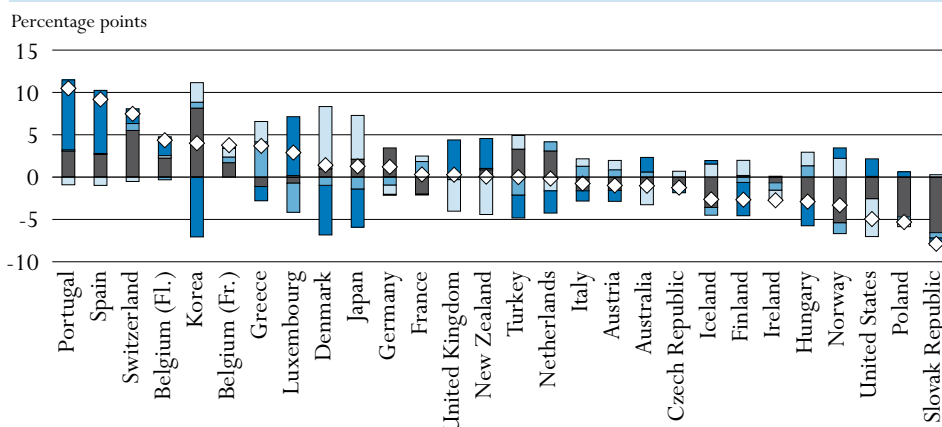
### Key Results

#### Chart B7.1. Contribution of various factors to salary cost per student as a percentage of GDP per capita, at the upper secondary level of education (2006)

*This chart shows the contribution (in percentage points) of the factors to the difference between salary cost per student (as a percentage of GDP per capita) in the country and the OECD average. For example, in Portugal, the salary cost per student is 11 percentage points higher than the OECD average. This is because Portugal has higher salaries (compared to GDP per capita) than the average, an above average instruction time for students and smaller class sizes than the average. However these effects are slightly dampened by a larger number of teaching hours for teachers than the average.*



Salary cost per student varies significantly between countries, from 3.6% of GDP per capita in the Slovak Republic (less than half of the OECD average rate of 11.4%) to over six times that rate in Portugal (22%, nearly twice the OECD average). Four factors influence these differences – salary level, instruction time for students, teaching time of teachers and average class size – so that a given level of salary cost per student can result from many different combinations of the four factors. For example, in Korea and Greece the salary cost per student (as a percentage of GDP per capita) is 15.5 and 15.2%, respectively, both notably higher than the OECD average. However, Korea's high salary cost results mainly from higher than average teacher salary levels and relatively large class sizes, while Greece reaches this high salary cost through a relatively high instruction time for students and lower than average teaching time for teachers.



Countries are ranked in descending order of the difference between the salary cost in percentage of GDP per capita and the OECD average.

Source: OECD, Table B7.3. See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).

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### *Other highlights of this indicator*

- 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 the overall spending on education and the level of student performance.
- The higher the level of education analysed, the higher the impact of teachers' salaries and the lower the impact of class size on salary cost per student as a percentage of GDP (compared to the OECD average). The main examples of this pattern are Austria, Belgium (Flemish Community), France, Norway, Switzerland and Turkey, where the main drivers of salary cost per student are teachers' salaries at the upper secondary level, and class size at the primary level.
- Together, class size and teaching time have more impact on the measure of salary cost per student at the lower secondary level, whereas teachers' salaries are the main driver for salary cost per student at upper secondary level (see Box B7.2). However, lower secondary levels of education present similar patterns to upper secondary levels of education with respect to the main drivers of above and below OECD average levels of salary cost per student as a percentage of GDP per capita.
- At the primary level of education, similarities and differences between countries are less obvious than at the upper secondary level of education, but class size is the main driver for the difference with average salary cost per student as a percentage of GDP per capita in 16 out of the 29 OECD countries with available data.

## INDICATOR B7

## Policy context

The relationship between the resources devoted to education and the outcomes achieved has been the focus of much education policy interest in recent years, as governments seek to achieve more and better education for the entire population. However, given the increasing pressures on public budgets, there is intense interest in ensuring that funding – public funding, in particular – is well directed in order for the desired outcomes to be achieved in the most effective way possible. Internationally, there is, of course, much attention to which education systems achieve the most in terms of the quality and equity of learning outcomes, but there is also considerable interest in knowing which systems achieve the most based on provided inputs. What are the main factors that drive investment in education? Would better performance be achieved if one of these factors were modified? Some of these questions have been addressed in the 2008 edition of *Education at a Glance* (Indicator B7). This edition focuses on the way a given level of expenditure in primary and secondary education can be reached through different combinations of factors. If the efficiency of educational services is to increase, countries must consider their choices carefully and improve their knowledge base of how such choices relate to value for money.

## Evidence and explanations

Many factors affect the relationship between spending per student and student performance. They include the organisation and management of schooling within the system (*e.g.* layers of management and the distribution of decision making, the geographic dispersion of the population), the organisation of the immediate learning environment of students (*e.g.* class size, hours of instruction) and the quality of the teaching workforce, as well as characteristics of the students themselves, most notably their socio-economic backgrounds.

Countries with similar levels of spending on education may reach different performance levels. Some results suggest that there are possibilities for reducing inputs while holding outputs constant, or, on the contrary, for maximising outputs while holding inputs constant. In *Education at a Glance 2008*, for instance, Indicator B7 showed that among OECD countries, there is the potential for increasing learning outcomes by 22% while maintaining current levels of resources (output efficiency).

The level of expenditure is therefore not the only factor to be taken into account when analysing the efficiency of the resources used in education. Since a given level of expenditure can result from various differences in education systems, analyses of differences between countries that have an impact on the level of expenditure may elucidate differences in performance.

Teachers' compensation usually makes up the largest part of expenditure on education and, as a consequence, of expenditure per student. It is a function of instruction time of students, teaching time of teachers, teachers' salaries and the number of teachers needed to teach students, which depends on class size (see Box B7.1). As a consequence, differences among countries in these four factors may explain differences in the level of expenditure per student. In the same way, a given level of expenditure may result from a different combination of these factors; for example, teachers' salaries may be higher in some countries than in others, or the amount of students' instruction time may differ.

### **Box B7.1. Relationship between salary cost per student and instruction time of students, teaching time of teachers, teachers' salaries and class size**

One way to analyse the factors that have an impact on expenditure per student and measure the extent of their effects is to compare the differences between national figures and the OECD average. This analysis aims at computing the differences between expenditure per student between countries and the OECD average, and then calculating the contribution of different factors to this variation.

This is based on a mathematical relationship between the different factors taken into account and follows the method presented in the Canadian publication *Education Statistics Bulletin* (2005) (see some explanations given in Annex 3). Educational expenditure is mathematically linked to many factors related to the school context of a country (number of hours of instruction time for students, number of teaching hours for teachers, estimated class size) and one factor relating to teachers (statutory salary):

Expenditure per student = (compensation of teachers + other expenditure)/number of students

Expenditure is broken down into the compensation of teachers and other expenditure (defined as all expenditure other than the compensation of teachers). The compensation of teachers divided by the number of students, or “the salary cost per student” (CCS), is estimated through:

$$CCS = SAL \times instT \times \frac{1}{teachT} \times \frac{1}{ClassSize} = \frac{SAL}{Ratiostud/teacher}$$

*SAL*: teachers' salaries (estimated by statutory salary after 15 years of experience)

*instT*: instruction time of students (estimated as the annual intended instruction time for students)

*teachT*: teaching time of teachers (estimated as the annual number of teaching hours for teachers)

*ClassSize*: a proxy for class size

*Ratiostud/teacher*: the ratio of students to teaching staff

With the exception of class size (which is not computed at upper secondary level, as class sizes are difficult to define and compare as students at this level may attend several classes depending on the subject area), values for the different variables can be obtained from the indicators published in *Education at a Glance 2008* (chapter D). However, for the purpose of the analysis, a “theoretical” class size or proxy class size is estimated based on the ratio of students to teaching staff and the number of teaching hours and instruction hours (see Box D2.1). As a proxy, this estimated class size should be interpreted with caution. To ease the reading, the “estimated class size” is referred to as “class size” in the text.

Using this mathematical relationship and comparing values for the four factors between one country and the OECD average allows one to measure both the direct and indirect contribution of each of these four factors to the variation of salary cost per student between a country and the OECD average (for more detail see Annex 3). For example, in the case where only two factors interact, if a worker receives a 10% increase of the hourly wage and increases the number of hours of work by 20%, their earnings will increase by 32%, as a consequence of the direct contribution of each of these variations (0.1 + 0.2) and the indirect contribution of these variations due to the combination of these two factors (0.1\*0.2).

### Difference in the combination of factors at upper secondary level of education

The columns of Table B7.3 present the level of teacher salary cost, as well as the contribution the four factors make to the difference from the OECD average at the upper secondary level of education. Salary cost per student varies from USD 574 in the Slovak Republic to about USD 10 065 in Luxembourg. In Luxembourg, the salary cost per student is USD 6 633 higher than the OECD average. Teachers' salaries account for most of this difference (USD 4 918) as the level of salary in Luxembourg is much higher than the OECD average. In the Slovak Republic, as well, teachers' salaries account for the large difference from the OECD average salary cost per student, although in the opposite direction. The salary cost per student in the Slovak Republic is USD 2 858 lower than OECD average, and low teachers' salaries (compared to the OECD average) contribute USD 2 536 to this difference.

However, the level of teachers' salaries and, as a consequence, the level of the salary cost per student, depend on a country's relative wealth. To control for these differences in wealth level between countries, the analysis has also been made using levels of teachers' salaries (and salary cost per student) relative to GDP per capita. The second part of the Table B7.3 presents salary cost as a percentage of GDP per capita to control for the effect of relative wealth on salary cost. In this table, the contribution that the four factors make to the difference in the salary cost per student (as a percentage of GDP per capita) between the country and the OECD average is shown in percentage points.


Salary cost per student varies a great deal between countries, from 3.6% of GDP per capita in the Slovak Republic (less than half of the OECD average rate of 11.4%) to over six times that rate in Portugal (22.0%, nearly twice the OECD average). In Portugal, the salary cost per student (as a percentage of GDP per capita) is 10.6 percentage points higher than the OECD average and this difference is mainly driven by a significantly below average class size compared to other OECD countries. However, in 15 out of the 28 OECD countries with available data, teachers' salaries are the main driver of the deviation of salary cost per student from the OECD average in upper secondary education (Table B7.2, Chart B7.1 and Box B7.2).

The four factors influencing salary cost interact differently in different countries, and reflect the range of policy choices that governments make. For example, in both Korea and Greece, salary cost per student (as a percentage of GDP per capita) is well above the OECD average (15.5% and 15.2% respectively) but the two countries combine instruction time, teaching time, class size and teachers' salaries (as a proportion of GDP per capita) in very different ways. In Korea, of the four factors, relatively large class size is the only factor acting to reduce salary cost per student, relative to the OECD average. Here, despite the size of this effect, it is more than counterbalanced by relatively high teacher salaries (as a proportion of GDP per capita), which together with above-average instruction time and below-average teaching time, result in an above average salary cost per student (as a percentage of GDP per capita). In contrast, higher than average salary cost per student in Greece is almost entirely attributable to large instruction time for students combined with low teaching time for teachers. These two combined effects outweigh the counter influences of below average teachers' salaries (as a percentage of GDP per capita) and above average class sizes (Table B7.3).

**Box B7.2. Main driver of the difference with OECD average of the salary cost per student as a percentage of GDP per capita, by level of education (2006)**

	Primary education	Lower secondary education	Upper secondary education
<b>Salary as % of GDP/capita</b>	<b>5 countries</b> (Germany, Iceland, Korea, Poland, the Slovak Republic)	<b>8 countries</b> (Germany, Hungary, Iceland, Korea, Norway, Poland, the Slovak Republic, Spain)	<b>15 countries</b> (Austria, Belgium [Fl.], Belgium [Fr.], the Czech Republic, France, Germany, Iceland, Italy, Korea, the Netherlands, Norway, Poland, the Slovak Republic, Switzerland, Turkey)
<b>Instruction time</b>	<b>7 countries</b> (Australia, Belgium [Fr.], the Czech Republic, Finland, Italy, the Netherlands, New Zealand)	<b>1 country</b> (Ireland)	<b>1 country</b> (Greece)
<b>Teaching time</b>	<b>1 country</b> (the United States)	<b>9 countries</b> (Australia, Austria, the Czech Republic, Denmark, Greece, Italy, New Zealand, the United Kingdom, the United States)	<b>6 countries</b> (Australia, Denmark, Ireland, Japan, New Zealand, the United States)
<b>Estimated class size</b>	<b>16 countries</b> (Austria, Belgium [Fl.], Denmark, France, Greece, Hungary, Ireland, Japan, Luxembourg, Mexico, Norway, Portugal, Spain, Switzerland, Turkey, the United Kingdom)	<b>10 countries</b> (Belgium [Fl.], Belgium [Fr.], Finland, France, Japan, Luxembourg, Mexico, the Netherlands, Portugal, Switzerland)	<b>6 countries</b> (Finland, Hungary, Luxembourg, Portugal, Spain, the United Kingdom)

Source: OECD. Table B7.1, Table B7.2 and Table B7.3. See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).

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Alongside such contrasts, there are also striking similarities in the policy choices made by countries. In Australia, New Zealand and the United Kingdom, the salary cost per student as a percentage of GDP per capita in each of these countries, results from the balancing of two opposite effects: above-average teaching time, acting to reduce salary cost per student relative to the OECD average, and relatively low class sizes, increasing salary cost per student relative to the OECD average. However, the salary cost per student (as a percentage of GDP per capita) resulting from this combination is above the OECD average in New Zealand and the United Kingdom but below the average in Australia, where teaching time and class sizes are closer to the OECD averages (Table B7.3 and Chart B7.1).

In countries with the lowest salary cost per student (as a percentage of GDP per capita) at the upper secondary level, low salary level (as a proportion of GDP per capita) is usually the main driver. This is the case in Iceland, Norway, Poland and the Slovak Republic. In Hungary and the United States, lower than average teachers' salaries, as a percentage of GDP per capita, combine with either above average class size or higher than average teaching time for teachers and result in low levels of salary cost per student. In contrast, among countries with the highest levels of salary cost per student (Portugal, Spain, Switzerland), no single factor dictates this position; rather, three of the four factors act to increase costs to varying degrees, but slightly above average teaching time leads to a decrease in the salary cost as a percentage of GDP per capita (Table B7.3 and Chart B7.1). A quite similar pattern appears in Belgium as nearly all factors act to increase the salary cost per student (as a percentage of GDP per capita).

### **Difference in the combination of factors at lower secondary level of education**

On the whole, class size and teaching time have more impact on the difference with the OECD average salary cost per student at lower secondary level whereas teachers' salaries are the main driver of the difference with the OECD average salary cost per student at upper secondary level (see Box B7.2). However, the lower secondary level of education presents some similarities with the upper secondary level of education in countries with the top and bottom salary cost per student. At the lower secondary level, the Slovak Republic and Luxembourg have, respectively, the lowest and highest salary cost per student (USD 595 and 10 065 respectively), and relative to GDP per capita, the Slovak Republic and Portugal have, respectively, the lowest and highest salary cost per student (3.7% and 19.8%) (Table B7.2). In the same way, countries with above average (and respectively below average) salary cost (as a percentage of GDP per capita) are usually also above the OECD average (respectively below the average) at upper secondary level of education.

For countries that have above the average salary cost per student (as a percentage of GDP per capita), class size is usually below the average, and this seems to be the main factor leading to an increase in the salary cost above the OECD average. This trend is more obvious than at the upper secondary level, even if there are exceptions (Japan and Korea, which have above average class sizes). For countries with below average salary cost per student (as a percentage of GDP per capita), low levels of teachers' salaries (as a percentage of GDP per capita) are usually, as for upper secondary levels of education, the main driver. France and the Netherlands, and to a larger extent, Mexico, are exceptions to this pattern, as the above average class size is the main driver of the below average salary cost per student (Table B7.2).

Nevertheless, there are some differences between upper and lower secondary levels of education for some countries. In Austria and Finland, the salary cost per student (as a percentage of GDP per capita) moves from below to above the OECD average between upper and lower secondary education, mainly as a result of the change of the impact of class size. In France and in the United Kingdom, changes in the impact of class size result in the reverse pattern. In Australia and Italy (both above the average at the lower secondary level) and the Netherlands and New Zealand (both below the average at lower secondary level), change from below to above the OECD average (or above to below the average, respectively) between upper and lower secondary levels results from the fact that the four factors are closer to the average at the lower secondary level than at the upper secondary level of education (Table B7.2).

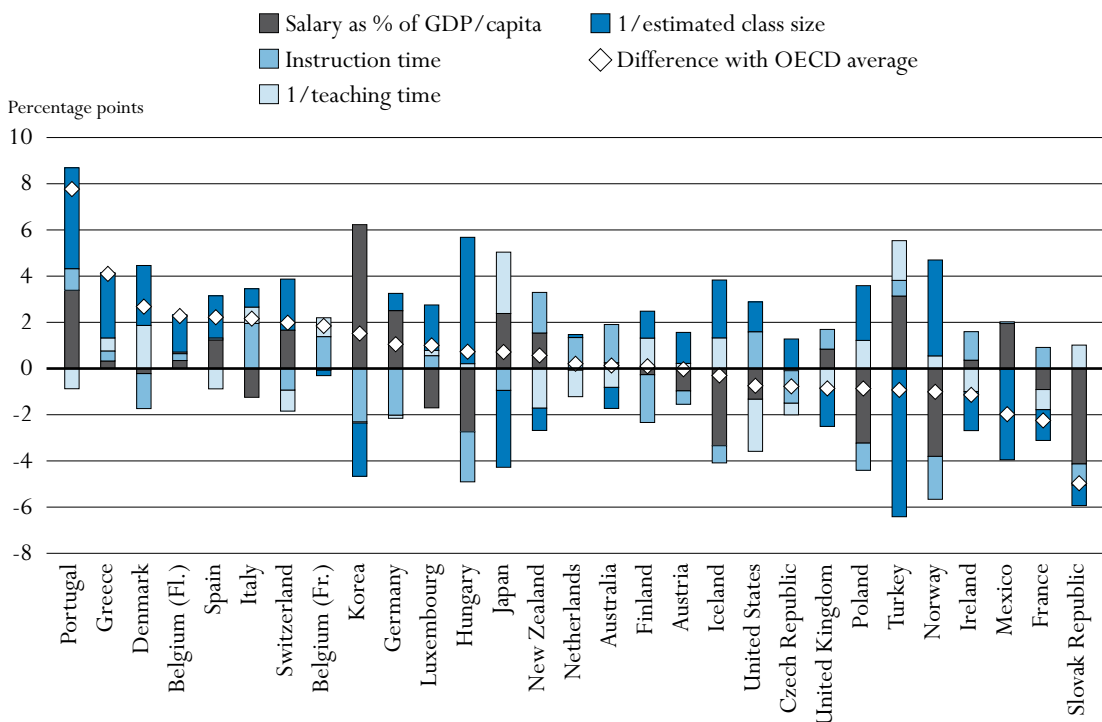


### Difference in the combination of factors at primary level of education

At the primary level of education (as it is the case at upper secondary), the Slovak Republic and Luxembourg are countries with, respectively, the lowest and highest salary cost per student (USD 439 and USD 6 110 respectively). Relative to GDP per capita, the Slovak Republic still has, at primary level, the lowest salary cost per student (2.8%), and Portugal the highest (15.5%), as this is also the case at the upper secondary level of education (Table B7.1).

However, similarities between countries are less obvious at the primary level of education when compared to the upper secondary level. At this level, class size is the main driver of the difference with the OECD average salary cost per student as a percentage of GDP per capita in 16 out of the 29 OECD countries with available data. In the three countries with the highest salary cost per student as a percentage of GDP per capita, differences in the level of salary cost between Denmark, Greece and Portugal are large; with a nearly 8 percentage points difference from the OECD average, Portugal has nearly 4 more points of difference than Greece and 5 more points of difference than Denmark. In these countries, the main driver for the difference with the OECD average is the smaller than average class size. However, whereas in Greece the contribution of class size exceeds the smaller effects of the three other factors, in Denmark, the below average teaching time of teachers increases this effect, and in Portugal, the effect is reinforced by the above average teachers' salaries as a percentage of GDP per capita (Table B7.1 and Chart B7.2).

**Chart B7.2. Contribution of various factors to salary cost per student as a percentage of GDP per capita, at primary level of education (2006)**



Countries are ranked in descending order of the difference between the salary cost in percentage of GDP per capita and the OECD average. Source: OECD, Table B7.1. See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).

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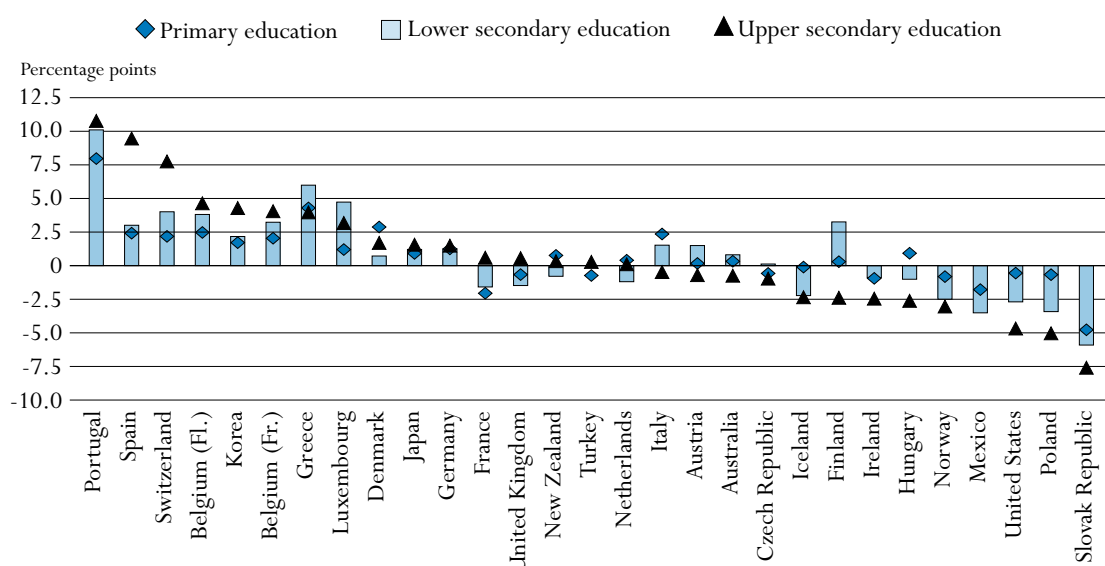
In countries with the lowest salary cost per student as a percentage of GDP per capita, no single factor can explain this level of salary cost compared to the average in all these countries. Whereas in the Slovak Republic, the main driver is the below average teachers' salaries as a percentage of GDP per capita, in the three other countries (France, Ireland and Mexico), the main driver of the low level of salary cost per student (as a percentage of GDP per capita) is above average class size, leading to a decrease in the salary cost per student (Table B7.1 and Chart B7.2).

### Differences in the combination of factors between levels of education

The difference of salary cost per student to the OECD average usually decreases as the level of education decreases. This pattern does not result from a single factor; it may result from a change in the various contributions of the different factors, or even from a change in the main driver of this difference with the OECD average levels of salary cost per student. The higher the level of education analysed, the higher the impact of teachers' salaries and lower is the impact of class size on the difference with the OECD average salary cost per student as a percentage of GDP. Main examples of this pattern are Austria, Belgium (Flemish Community), France, Norway, Switzerland and Turkey. In all of these countries, the main driver of the difference with the OECD average salary cost per student is teachers' salaries at upper secondary level whereas it is class size at primary level (see Box B7.2).


Comparisons of the different levels of education show that differences between countries at the level of the salary cost per student (as a percentage of GDP per capita) are largest at the upper secondary level of education, and these differences between countries decrease with the level of education analysed (Chart B7.3).

**Chart B7.3. Difference between the salary cost per student in percentage of GDP per capita and the OECD average, by level of education (2006)**



Countries are ranked in descending order of the difference between the salary cost in percentage of GDP per capita and the OECD average in upper secondary education.

Source: OECD, Table B7.1, Table B7.2 and Table B7.3. See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).

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This trend is the most obvious in countries where the salary cost per student (as a percentage of GDP per capita) is furthest from the OECD average. For example, Belgium, Korea, Portugal, Spain and Switzerland have the highest levels of salary cost per student (as a percentage of GDP per capita) at the upper secondary level of education, and the salary cost per student (as a percentage of GDP per capita) at lower secondary levels is up to 8 percentage points lower than at upper secondary levels of education. Salary cost per student (as a percentage of GDP per capita) at the primary level is between 0.6 to 4 percentage points lower than it is at the lower secondary level of education. In these countries, salary cost (as a percentage of GDP per capita) is above the OECD average in each of these levels of education.

There is a similar pattern for countries with the lowest levels of salary cost per student as a percentage of GDP per capita, but in these countries, the level of salary cost is below the OECD average, whatever the level of education. In countries with salary cost per student (as a percentage of GDP per capita) closer to the average, the salary cost per student (as a percentage of GDP per capita) may be above the OECD average at upper secondary level and decrease to lower than the OECD average at the lower secondary or primary levels. This is the case in France and New Zealand, for example. In a few cases (Italy and to some extent in Australia and Austria), the trend is in the opposite direction: from below the average at the upper secondary level to above the average at the primary level, and the difference from the OECD average increases with the level of education (except in Italy).

However, there are a few exceptions to this general trend, which show that the differences of salary cost per student to the OECD average increases as the level of education decreases. In Greece and Luxembourg, there are larger differences in salary cost, as a percentage of GDP per capita, with the OECD average at the lower secondary level than at the upper secondary level of education. The extent of the contribution of the four factors explains these effects. In Luxembourg, there is no clear pattern as to what extent the contribution changes between levels of education, but the direction of the contribution can also change. In Greece, class size contributes to an increase in the salary cost per student at the lower secondary level of education, but it decreases the salary cost per student at the upper secondary level. This is the result of an increase in the class size between these two levels. In Denmark, differences from the OECD average are larger at the primary level than at the lower and upper secondary levels of education, but no single factor explains these changes between levels of education. This results in a very different contribution of the four factors at these three levels, with class size and teaching time playing the main roles, whatever the level of education.

The fact that similar levels of expenditure between countries can mask contrasting policy choices made by countries explains a bit about why simple comparisons of student performance and expenditure levels fail to show strong correlations. Further analysis is needed to examine what influence these different policy choices actually have on the quality and equity of learning outcomes.

### Definitions and methodologies

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.

In most cases, the values for these variables are derived from *Education at a Glance 2008*, and refer to the school year 2005/06 and the calendar year 2005 for indicators related to finance. However, in order to compensate for missing values for some variables, some data have been estimated on the basis of data published in previous editions of *Education at a Glance*. When it was not possible to make estimates or proxy figures were not available, the missing values have been replaced by the average for all OECD countries.

Further details on the analysis of these factors are available in Annex 3 at [www.oecd.org/edu/eqg2009](http://www.oecd.org/edu/eqg2009).

Table B7.1.

**Contribution of various factors to salary cost per student at primary level of education (2006)**

**Readers' guide:** In Australia, at USD 2 671, the salary cost per student exceeds the OECD average by USD 409. Above-average salaries and above-average instruction time increase the difference from the OECD average by USD 436 and 522, respectively, whereas an above-average teaching time and an above-average estimated class size decrease the difference from the average by USD 260 and 290. The sum of these effects results in a positive difference from the OECD average of USD 409.

Contribution (in USD) of school factors to salary cost per student							
	Salary cost per student	Difference from OECD average	Contribution to the difference from the OECD average				
				Instruction time (for students)	1/teaching time (for teachers)	1/estimated class size	
			(1)	(2)	(3)	(4)	(5)
OECD countries	Australia	2 671	409	436	522	-260	-290
	Austria	2 626	364	53	-184	70	424
	Belgium (Fl.)	3 209	947	338	113	0	495
	Belgium (Fr.)	3 071	809	214	424	253	-82
	Czech Republic	1 411	-851	-698	-348	-127	321
	Denmark	3 500	1 238	311	-480	589	818
	Finland	2 385	123	0	-620	395	349
	France	1 625	-637	-256	270	-257	-394
	Germany	2 678	416	838	-606	-42	225
	Greece	3 012	750	-295	116	156	772
	Hungary	1 439	-823	-1 701	-510	50	1 338
	Iceland	2 642	380	-605	-239	425	799
	Ireland	2 508	246	741	415	-336	-574
	Italy	2 744	482	-507	559	203	227
	Japan	2 558	296	782	-282	794	-998
	Korea	1 973	-289	839	-557	-13	-558
	Luxembourg	6 110	3 848	2 524	267	114	944
	Mexico	650	-1 612	-871	13	-6	-749
	Netherlands	2 755	493	413	429	-391	42
	New Zealand	2 064	-198	48	475	-462	-260
	Norway	3 200	938	-69	-690	201	1 496
	Poland	932	-1 330	-1 895	-266	280	550
	Portugal	3 095	833	-231	220	-207	1 050
	Slovak Republic	439	-1 823	-1 627	-231	261	-227
	Spain	2 713	451	180	1	-249	519
	Switzerland	3 447	1 185	1 067	-306	-300	724
	Turkey	530	-1 732	-1 133	118	305	-1 023
	United Kingdom	2 169	-93	413	260	-255	-511
	United States	2 909	647	441	553	-801	454

Source: OECD. Data from *Education at a Glance 2008* ([www.oecd.org/edu/eag2008](http://www.oecd.org/edu/eag2008)). See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).


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Table B7.1. (continued)

## Contribution of various factors to salary cost per student at primary level of education (2006)

**Readers' guide:** In Australia, at 7.9% of the GDP per capita, the salary cost per student exceeds the OECD average by 0.2 percentage point. Above-average salaries and above-average instruction time increase the difference from the OECD average by 0.3 and 1.6 percentage points, respectively, whereas an above-average teaching time and above-average class size decrease the difference from the average by 0.8 and 0.9 percentage point. The sum of these effects results in a positive difference from the OECD average of 0.2 percentage point.

## Contribution (in percentage points) of school factors to salary cost per student as a percentage of GDP per capita

	Salary cost per student as % of GDP/capita	Difference from OECD average	Contribution to the difference from the OECD average			
			Salary as % of GDP/capita	Instruction time (for students)	1/teaching time (for teachers)	1/estimated class size
	(1)	(2)	(3)	(4)	(5)	(6)
OECD countries						
Australia	7.9	0.2	0.3	1.6	-0.8	-0.9
Austria	7.7	0.0	-1.0	-0.6	0.2	1.3
Belgium (Fl.)	10.0	2.3	0.3	0.4	0.0	1.6
Belgium (Fr.)	9.6	1.9	0.0	1.4	0.8	-0.3
Czech Republic	7.0	-0.7	-0.1	-1.4	-0.5	1.3
Denmark	10.4	2.7	-0.2	-1.5	1.9	2.6
Finland	7.8	0.1	-0.3	-2.1	1.3	1.2
France	5.5	-2.2	-0.9	0.9	-0.9	-1.3
Germany	8.8	1.1	2.5	-2.0	-0.1	0.8
Greece	11.8	4.1	0.3	0.4	0.6	2.8
Hungary	8.5	0.8	-2.7	-2.2	0.2	5.5
Iceland	7.4	-0.3	-3.3	-0.7	1.3	2.5
Ireland	6.6	-1.1	0.4	1.2	-1.0	-1.7
Italy	9.9	2.2	-1.2	2.0	0.7	0.8
Japan	8.4	0.8	2.4	-0.9	2.7	-3.3
Korea	9.2	1.6	6.2	-2.3	-0.1	-2.3
Luxembourg	8.7	1.0	-1.7	0.6	0.2	2.0
Mexico	5.8	-1.9	2.0	0.1	0.0	-3.9
Netherlands	7.9	0.3	0.0	1.3	-1.2	0.1
New Zealand	8.3	0.6	1.5	1.8	-1.7	-1.0
Norway	6.7	-1.0	-3.8	-1.9	0.5	4.2
Poland	6.9	-0.8	-3.2	-1.2	1.2	2.4
Portugal	15.5	7.8	3.4	0.9	-0.9	4.4
Slovak Republic	2.8	-4.9	-4.1	-0.9	1.0	-0.9
Spain	10.0	2.3	1.3	0.0	-0.9	1.8
Switzerland	9.7	2.0	1.7	-0.9	-0.9	2.2
Turkey	6.8	-0.9	3.1	0.7	1.7	-6.4
United Kingdom	6.9	-0.8	0.8	0.9	-0.8	-1.7
United States	7.0	-0.7	-1.3	1.6	-2.3	1.3

Source: OECD. Data from *Education at a Glance 2008* ([www.oecd.org/edu/eag2008](http://www.oecd.org/edu/eag2008)). See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).


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Table B7.2.

## Contribution of various factors to salary cost per student at lower secondary level of education (2006)

Contribution (in USD) of school factors to salary cost per student						
	Salary cost per student	Difference from OECD average	Contribution to the difference from the OECD average			
			Salary	Instruction time (for students)	1/teaching time (for teachers)	1/estimated class size
	(1)	(2)	(3)	(4)	(5)	(6)
<b>OECD countries</b>						
Australia	3 556	637	375	309	-457	410
Austria	3 803	884	75	68	530	211
Belgium (Fl.)	4 318	1 400	183	39	142	1 037
Belgium (Fr.)	4 132	1 214	24	290	247	653
Czech Republic	1 983	-936	-1 117	-125	260	47
Denmark	3 487	569	110	-100	296	262
Finland	3 933	1 014	-25	-429	643	825
France	2 392	-526	-347	315	310	-803
Germany	3 324	405	903	-223	-201	-74
Greece	3 984	1 065	-645	52	831	828
Hungary	1 470	-1 448	-2 049	35	573	-7
Iceland	2 642	-276	-888	-208	161	658
Ireland	3 332	414	728	-107	-103	-104
Italy	3 102	183	-575	449	508	-199
Japan	3 289	371	769	-249	1 087	-1 236
Korea	2 523	-395	886	-227	747	-1 801
Luxembourg	10 065	7 146	4 906	-1 158	627	2 771
Mexico	694	-2 224	-808	374	-622	-1 168
Netherlands	2 938	19	549	377	-158	-749
New Zealand	2 205	-714	-133	123	-785	81
Norway	3 411	492	-316	-407	268	948
Poland	846	-2 072	-2 161	-182	94	177
Portugal	3 944	1 026	-560	-99	-219	1 904
Slovak Republic	595	-2 324	-2 262	-106	142	-98
Spain	3 452	533	360	58	-8	124
Switzerland	4 850	1 931	1 681	-113	-744	1 107
Turkey	a	a	a	a	a	a
United Kingdom	2 582	-337	306	-16	-628	1
United States	2 901	-18	309	127	-1 242	788


Source: OECD. Data from *Education at a Glance 2008* ([www.oecd.org/edu/eag2008](http://www.oecd.org/edu/eag2008)). See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).StatLink  <http://dx.doi.org/10.1787/664466141103>

Table B7.2. (continued)

**Contribution of various factors to salary cost per student at lower secondary level of education (2006)**

*Contribution (in percentage points) of school factors to salary cost per student as a percentage of GDP per capita*

	Salary cost per student as % of GDP/capita	Difference from OECD average	Contribution to the difference from the OECD average			
			Salary as % of GDP/capita	Instruction time (for students)	1/teaching time (for teachers)	1/estimated class size
	(1)	(2)	(3)	(4)	(5)	(6)
OECD countries						
Australia	10.5	0.8	0.0	1.0	-1.4	1.3
Austria	11.1	1.5	-1.0	0.2	1.7	0.7
Belgium (Fl.)	13.5	3.8	-0.1	0.1	0.5	3.3
Belgium (Fr.)	12.9	3.2	-0.6	0.9	0.8	2.1
Czech Republic	9.8	0.1	-0.6	-0.5	1.0	0.2
Denmark	10.4	0.7	-0.7	-0.3	0.9	0.8
Finland	12.9	3.3	-0.2	-1.4	2.1	2.7
France	8.1	-1.6	-1.0	1.1	1.0	-2.7
Germany	10.9	1.2	2.9	-0.7	-0.7	-0.2
Greece	15.6	6.0	-0.2	0.2	3.0	3.0
Hungary	8.6	-1.0	-3.4	0.1	2.3	0.0
Iceland	7.4	-2.2	-4.1	-0.6	0.5	2.0
Ireland	8.8	-0.9	0.0	-0.3	-0.3	-0.3
Italy	11.2	1.5	-1.1	1.5	1.8	-0.7
Japan	10.9	1.2	2.5	-0.8	3.6	-4.1
Korea	11.8	2.2	7.5	-0.9	3.0	-7.4
Luxembourg	14.4	4.7	0.2	-2.2	1.2	5.5
Mexico	6.1	-3.5	4.1	1.8	-3.2	-6.2
Netherlands	8.5	-1.2	0.4	1.2	-0.5	-2.3
New Zealand	8.9	-0.8	1.3	0.4	-2.9	0.3
Norway	7.2	-2.5	-4.7	-1.1	0.7	2.6
Poland	6.2	-3.4	-3.8	-0.8	0.4	0.7
Portugal	19.8	10.1	3.7	-0.4	-0.9	7.8
Slovak Republic	3.7	-5.9	-5.7	-0.4	0.5	-0.4
Spain	12.7	3.0	2.4	0.2	0.0	0.4
Switzerland	13.7	4.0	3.2	-0.3	-2.2	3.3
Turkey	a	a	a	a	a	a
United Kingdom	8.2	-1.5	0.6	-0.1	-2.0	0.0
United States	7.0	-2.7	-1.8	0.4	-3.5	2.3

Source: OECD. Data from *Education at a Glance 2008* ([www.oecd.org/edu/eag2008](http://www.oecd.org/edu/eag2008)). See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).


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Table B7.3.

## Contribution of various factors to salary cost per student at upper secondary level of education (2006)

Contribution (in USD) of school factors to salary cost per student						
	Salary cost per student	Difference from OECD average	Contribution to the difference from the OECD average			
			Salary	Instruction time (for students)	1/teaching time (for teachers)	1/estimated class size
	(1)	(2)	(3)	(4)	(5)	(6)
<b>OECD countries</b>						
Australia	3 556	124	180	184	-798	558
Austria	3 583	151	-63	273	356	-415
Belgium (Fl.)	5 083	1 651	968	-100	88	695
Belgium (Fr.)	4 895	1 462	792	201	320	149
Czech Republic	2 078	-1 354	-1 379	-33	176	-118
Denmark	4 338	906	760	-311	2 337	-1 879
Finland	2 687	-745	97	-191	541	-1 192
France	3 498	65	-654	549	194	-24
Germany	3 872	440	1 092	-282	-337	-34
Greece	3 865	433	-930	1 161	667	-465
Hungary	1 462	-1 970	-1 938	323	399	-755
Iceland	3 151	-281	-617	-297	500	133
Ireland	3 332	-100	570	-294	-409	34
Italy	2 978	-454	-729	368	258	-351
Japan	3 867	435	663	-422	1 561	-1 366
Korea	3 306	-126	849	169	576	-1 719
Luxembourg	10 065	6 633	4 918	-1 762	92	3 385
Mexico	m	m	m	m	m	m
Netherlands	3 929	497	1 537	350	-530	-860
New Zealand	2 872	-560	-374	44	-1 204	974
Norway	3 892	459	-329	-471	810	450
Poland	838	-2 594	-2 466	-199	-81	153
Portugal	4 388	956	-900	36	-219	2 039
Slovak Republic	574	-2 858	-2 536	-162	74	-234
Spain	5 636	2 204	319	33	-279	2 130
Switzerland	6 731	3 299	2 616	273	-172	583
Turkey	894	-2 538	-1 985	-371	292	-474
United Kingdom	3 716	284	166	-82	-1 152	1 352
United States	2 723	-709	119	27	-1 574	719


Source: OECD. Data from *Education at a Glance 2008* ([www.oecd.org/edu/eag2008](http://www.oecd.org/edu/eag2008)). See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).StatLink  <http://dx.doi.org/10.1787/664466141103>


Table B7.3. (continued)

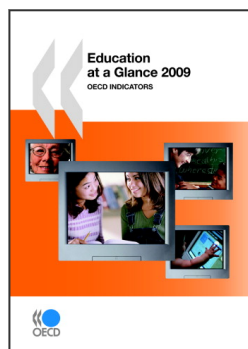
Contribution of various factors to salary cost per student at upper secondary level of education (2006)

Contribution (in percentage points) of school factors to salary cost per student as a percentage of GDP per capita

	Salary cost per student as % of GDP/capita	Difference from OECD average	Contribution to the difference from the OECD average			
			Salary as % of GDP/capita	Instruction time (for students)	1/teaching time (for teachers)	1/estimated class size
	(1)	(2)	(3)	(4)	(5)	(6)
OECD countries						
Australia	10.5	-0.9	-0.8	0.6	-2.5	1.7
Austria	10.5	-0.9	-1.6	0.9	1.1	-1.3
Belgium (Fl.)	15.8	4.4	2.3	-0.3	0.3	2.2
Belgium (Fr.)	15.3	3.9	1.7	0.6	1.0	0.5
Czech Republic	10.2	-1.2	-1.3	-0.1	0.7	-0.5
Denmark	12.9	1.5	1.0	-1.0	7.4	-5.9
Finland	8.8	-2.6	0.2	-0.6	1.8	-3.9
France	11.8	0.4	-2.0	1.8	0.6	-0.1
Germany	12.7	1.3	3.4	-0.9	-1.1	-0.1
Greece	15.2	3.8	-1.1	4.2	2.4	-1.7
Hungary	8.6	-2.8	-2.6	1.3	1.6	-3.1
Iceland	8.9	-2.5	-3.6	-0.9	1.5	0.4
Ireland	8.8	-2.6	-0.7	-0.9	-1.2	0.1
Italy	10.7	-0.7	-1.6	1.3	0.9	-1.2
Japan	12.8	1.4	2.1	-1.4	5.2	-4.5
Korea	15.5	4.1	8.1	0.7	2.3	-7.1
Luxembourg	14.4	3.0	-0.7	-3.4	0.2	7.0
Mexico	m	m	m	m	m	m
Netherlands	11.3	-0.1	3.1	1.1	-1.6	-2.6
New Zealand	11.5	0.1	0.9	0.2	-4.4	3.5
Norway	8.2	-3.2	-5.4	-1.3	2.2	1.2
Poland	6.2	-5.2	-4.7	-0.8	-0.3	0.6
Portugal	22.0	10.6	3.0	0.1	-0.9	8.3
Slovak Republic	3.6	-7.8	-6.6	-0.6	0.3	-0.9
Spain	20.7	9.3	2.7	0.1	-1.0	7.5
Switzerland	19.0	7.6	5.5	0.8	-0.5	1.7
Turkey	11.5	0.1	3.3	-2.1	1.6	-2.7
United Kingdom	11.8	0.4	0.0	-0.3	-3.7	4.4
United States	6.5	-4.9	-2.6	0.1	-4.5	2.1

Source: OECD. Data from *Education at a Glance 2008* ([www.oecd.org/edu/eag2008](http://www.oecd.org/edu/eag2008)). See Annex 3 for notes ([www.oecd.org/edu/eag2009](http://www.oecd.org/edu/eag2009)).

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