

WHICH FACTORS INFLUENCE THE LEVEL OF EXPENDITURE?

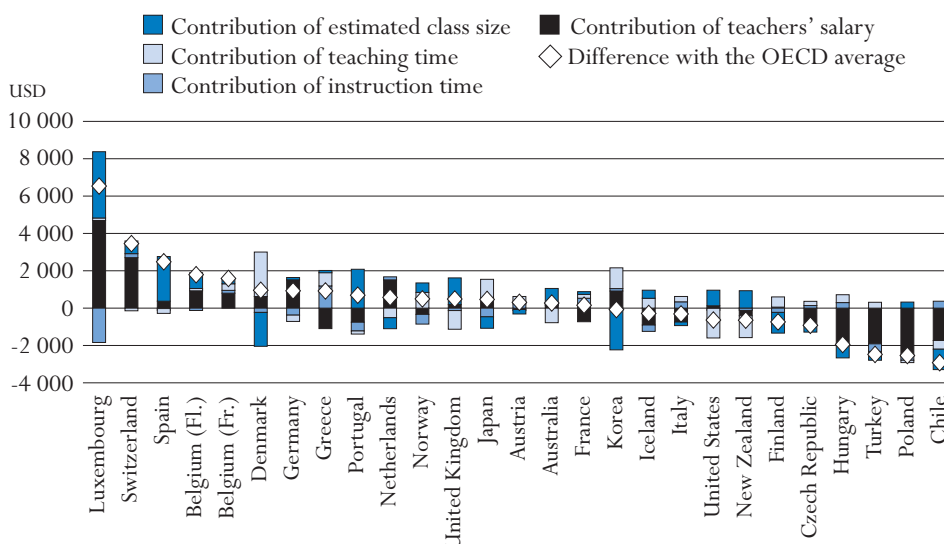
This indicator examines the policy choices countries make when investing their resources in primary and secondary education, such as trade-offs between the hours that students spend in the classroom, the number of teaching hours of teachers, class sizes (proxy measure) and teachers' salaries. First, differences in the combination of factors that influence the salary cost per student are analysed at the primary, lower secondary and upper secondary levels of education. Next, to exclude differences in the countries' level of wealth, salary cost per student is compared to GDP per capita. This indicator also presents the main reforms implemented by countries during the last decade regarding these four factors.

Key results

Chart B7.1. Contribution (in USD) of various factors to salary cost per student, at upper secondary level of education (2007)


This chart shows the contribution (in USD) of the factors to the difference between salary cost per student in the country and the OECD average. For example, in Spain, the salary cost per student 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 OECD average (USD -23) and above-average teaching time for teachers (USD -259) compared to the OECD average. However these effects are sharply dampened by significantly smaller class sizes (USD +2 394) than the average.

Salary cost per student varies significantly among countries. For example, it is more than ten times greater in Luxembourg, Spain and Switzerland than in Chile (USD 528). Four factors influence salary cost per student: the level of teachers' salaries, instruction time for students, teaching time of teachers and average class size, and a given level of salary cost per student can result from many different combinations of the four factors. For example, in Japan and the United Kingdom the salary cost per student is USD 3 913 and USD 3 937, respectively, both slightly above the OECD average of USD 3 449. However, Japan's lower than average teaching time of teachers is the main driver of the salary cost per student, while the United Kingdom reaches above-average salary cost per student through a relatively smaller class size than the OECD average.



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

Source: OECD, Table B7.3. See Annex 3 for notes (www.oecd.org/edu/eag2010/).

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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 overall spending on education and the level of student performance.
- At the lower secondary level of education, salary cost per student are the highest in Luxembourg (USD 9 985) and Switzerland (USD 5 065), but are below USD 1 500 only in Chile, Hungary, Mexico and Poland. Except in Mexico, these differences are mostly influenced by the level of teachers' salaries.
- In five out of the seven countries (Belgium [Flemish and French Communities], Finland, Greece and Portugal) with the highest salary costs per students at lower secondary level, class size is below the average and is the main source of the difference with the average salary cost per student.
- Comparisons of the different levels of education show that differences in salary cost per student with the OECD average are usually largest at the upper secondary level of education (in 13 out of 27 OECD countries) and smallest at primary level of education (in 17 out of 27 OECD countries). This trend is most obvious in countries where salary cost per student is furthest from the OECD average.
- When salary cost per student is compared to GDP per capita to exclude differences in countries' wealth, relative teachers' salaries are less often the main driver of the difference with the average level relative salary cost per student, especially in countries that have high levels of salaries and GDP per capita compared to other countries (for example Luxembourg and Switzerland) and also in countries that have low levels of salaries and GDP per capita compared to other countries (for example Chile, the Czech Republic and Turkey).
- The higher the level of education analysed, the greater the impact of relative teachers' salaries and the lower the impact of class size on relative salary cost per student (in percentage of GDP per capita) compared to the OECD average. The main examples of this pattern are Austria, France, Hungary and Switzerland where the main drivers of relative salary costs per student are teachers' salaries at the upper secondary level, and class size at the primary level.

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 pressure on public budgets, there is intense interest in ensuring that funding – public funding, in particular – is directed so as to achieve the desired outcomes as effectively as possible. 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 were addressed in Indicator B7 of the 2008 edition of *Education at a Glance*. This edition focuses on the ways in which a given level of expenditure in primary and secondary education can be reached through different combinations of factors.

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 students themselves, most notably their socio-economic backgrounds.

Countries with similar levels of spending on education may have different performance levels. Some results suggest that there are possibilities for improving efficiency by reducing inputs while holding outputs constant, or, on the contrary, for maximising outputs while holding inputs constant. However, this requires better understanding of how resources are invested by countries in their education systems. For this reason, the level of expenditure is 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 different choices regarding the combination of inputs, comparative analysis of the factors that affect the level of expenditure may clarify differences in performance.

Teachers' compensation is usually the largest part of expenditure on education and thus 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 (Box B7.1). 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.

Difference in the combination of factors at the primary and secondary levels of education (in USD)

Various reforms have been implemented during the last decade in primary and secondary education which have had an impact on the factors that contribute to the variation in the salary cost per student (Box B7.2). This indicator presents the effects on the salary cost per student of these four factors in 2007, but all the reforms implemented in the last decade should serve to better understand which changes countries have made during this period and to observe whether these choices have led to reduce/increase in a country the differences relative to other countries.

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 with an impact on expenditure per student and to 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 in expenditure per student among countries and the OECD average, and then calculating the contribution of different factors to the variation to the OECD average.

This exercise is based on a mathematical relationship between the different factors and follows the method presented in the Canadian publication *Education Statistics Bulletin* (2005) (see explanations in Annex 3). Educational expenditure is mathematically linked to factors related to a country's school context (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 is broken down into compensation of teachers and other expenditure (defined as all expenditure other than compensation of teachers). 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 because 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* (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 facilitate reading, the "estimated class size" is referred to as "class size" in the text.

Using this mathematical relationship and comparing a country's values for the four factors to the OECD averages makes it possible to measure both the direct and indirect contribution of each of these four factors to the variation in salary cost per student between that country and the OECD average (for more details see Annex 3). For example, in the case where only two factors interact, if a worker receives a 10% increase in the hourly wage and increases the number of hours of work by 20%, his/her earnings will increase by 32% as a result 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 the two factors (0.1 * 0.2).

At the primary level of education, salary cost per student varies from less than USD 550 in Chile (USD 526) to more than USD 6 000 in Luxembourg (USD 6 115, or slightly under triple the OECD average of USD 2 307). These differences in salary costs per student are mostly influenced by the level of teachers' salaries in these countries (Table B7.1). Teachers' salaries in Luxembourg contribute to more than USD 2 444 to the difference with the OECD average salary cost per student, as teachers' salaries in Luxembourg are much higher than the OECD average (USD 68 720 compared to OECD average of USD 36 496). In contrast, in Chile, teacher's salaries contribute for USD 1 255 to the difference with the OECD average salary cost per student (at USD 12 976, teachers' salaries are much lower than the OECD average of USD 36 496).

At the lower secondary level of education, salary cost per student is the highest in Luxembourg (USD 9 985, more than three times the OECD average of USD 2 950) and Switzerland (USD 5 065), but is below USD 1 500 only in Chile (USD 526, less than one-fifth of the OECD average), Hungary (USD 1 416), Mexico (USD 703) and Poland (USD 896). Except in Mexico, these differences are, as at the primary level, mostly influenced by the level of teachers' salaries in these countries (Table B7.2). However, teachers' salaries are not necessarily the factor which contributes most to observed variation from the OECD average. In five out of the seven countries (Belgium [Flemish and French Communities], Finland, Greece and Portugal) with the highest salary costs per students at lower secondary level, class size is below the average and is the main source of the difference with the average salary cost per student. In contrast, in four out of the seven countries with the lowest salary cost per student (Chile, the Czech Republic, Hungary and Poland), the main driver is below-average teachers' salaries, and in the three other countries, this is the above-average class size (France and Mexico) or above-average teaching time (New Zealand).

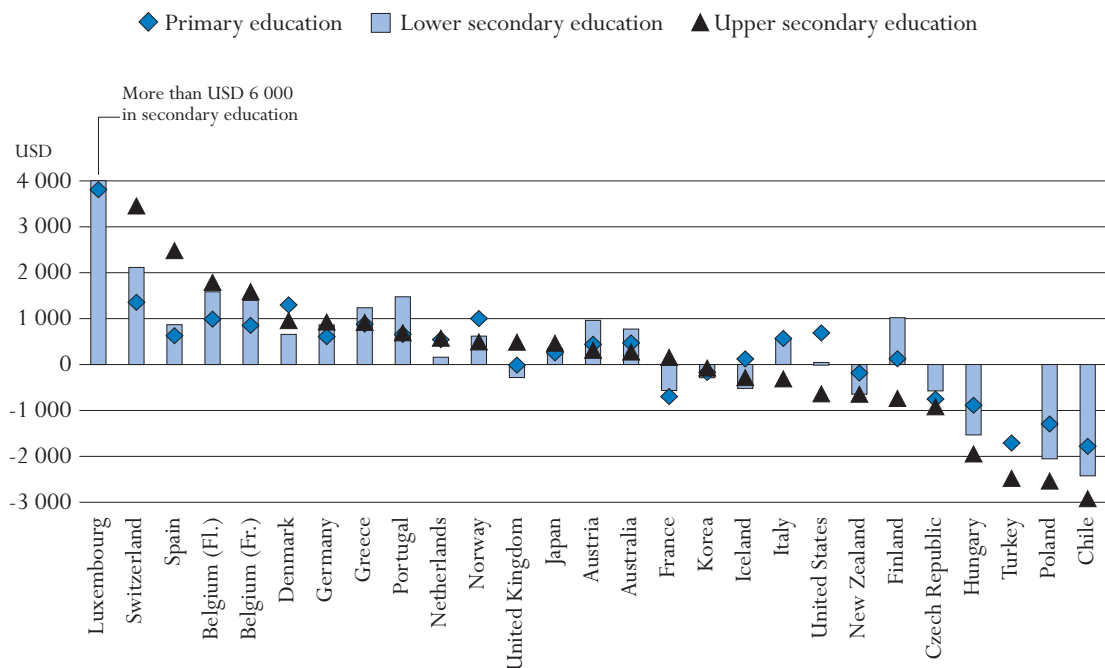
At upper secondary level of education, salary cost per student varies from USD 528 in Chile to around three times the OECD average of USD 3 449 in Luxembourg (USD 9 985). Teachers' salaries account for most of this difference (USD 4 693) as teachers' salaries in Luxembourg are much higher than the OECD average. In Chile as well, teachers' salaries account for the large difference from the OECD average salary cost per student, although in the opposite direction (Table B7.3 and Chart B7.1).

Comparisons of the different levels of education show that differences in salary cost per student with the OECD average are usually largest at the upper secondary level of education in 13 out the 27 OECD countries and smallest at primary level of education also in 17 out of the 27 OECD countries with available data (Chart B7.2). This trend is most obvious in countries where salary cost per student is furthest from the OECD average. For example, Belgium (Flemish and French Communities), Spain and Switzerland have four of the five highest levels of salary cost per student at the upper secondary level of education and the salary cost per student at primary and lower secondary levels is at least USD 190 lower than at upper secondary level.

The fact that similar levels of expenditure can mask contrasting policy choices made by countries helps explain why student performance and expenditure tend not to be strongly correlated. Thus, the four factors that influence salary cost interact differently between countries, and reflect the range of governments' policy choices. For example, in both Denmark and Germany salary cost

per student at upper secondary level is well above the OECD average (USD 4 406 and USD 4 376, respectively) but the two countries combine instruction time, teaching time, class size and teachers' salaries in very different ways. In Denmark, of the four factors, relatively large class size mainly, and in a lesser extent below-average instruction time, act to reduce salary cost per student relative to the OECD average. In spite of the size of these effects, it is more than counterbalanced by relatively high teachers' salaries, which, together with below-average teaching time, result in above-average salary cost per student. In contrast, higher than average salary cost per student in Germany is almost entirely attributable to above-average teachers' salary combined with also smaller than average class size. These two combined effects outweigh the small influences of below-average instruction time and above-average teaching time (Table B7.3).

Chart B7.2. Difference between the salary cost per student and the OECD average (in USD), by level of education (2007)



Countries are ranked in descending order of the difference between the salary cost and the OECD average in upper secondary education. Source: OECD, Tables B7.1, B7.2 and B7.3. See Annex 3 for notes (www.oecd.org/edu/eag2010).

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However, alongside such contrasts, there are also striking similarities in countries' policy choices. In Australia, New Zealand, the United Kingdom and the United States, salary cost per student at upper secondary level results from the balancing of two opposing effects: above-average teaching time acts to reduce salary cost per student relative to the OECD average, and relatively low class sizes increase salary cost per student relative to the OECD average. However, salary cost per student resulting from this combination is above the OECD average in Australia and the United Kingdom, but below the average in New Zealand and the United States, where teaching time and class sizes are closer to the OECD averages (Table B7.3).

Box B7.2. Main reforms of the last decade concerning the four factors used to calculate salary cost per student

Many countries have implemented reforms over the last decade in order to change their education system's regulations on instruction time for students, teacher's salaries, class size and teaching time for teachers. All the reforms implying a quantitative increase or decrease in these factors have a direct impact on the salary cost per student calculated in this indicator. Only 3 out of the 17 countries with available data – Mexico, Spain and Sweden – did not introduce changes to any of these four factors since 1995.

First, Table B7.4 shows that some countries have a clearly decentralised system which gives states and regions autonomy to decide on the reforms best suited to improving their education system. Among the 17 countries with available information, Australia, Switzerland and the United States follow this pattern, with more than 70% of initial sources of public educational funding generated at the regional level for primary and secondary education (see Table B4.3a available on line). In these countries regions/states can carry out reforms which do not necessarily converge towards a policy line fixed at national level. In these countries, the salary cost per student reflects the average of all regional bodies and may result from different policies. The results might well be different if salary cost per student was computed at the region/state level.

Second, many countries have undertaken reforms at the national level during the last decade to adjust the annual number of hours of instruction for pupils in primary and secondary education. In all cases, the reforms have brought the countries closer to the OECD average (see Indicator D1). Austria (only in lower secondary education), Belgium (Flemish Community), France, Hungary (only in upper secondary education), Italy and the Netherlands have decreased the annual number of hours of instruction for pupils over the last decade. Prior to the reform, all of these countries had a significantly higher than average annual number of hours of instruction (see Indicator D1). By contrast, Finland, Norway and Portugal (only in upper secondary education) increased the annual number of hours of instruction over the last decade. Prior to the reforms, these countries had a significantly lower than average annual number of hours of instruction. This partly explains why in primary and secondary education instruction time is rarely the main driver of the difference between a country's salary cost per student and the OECD average.

Among countries with reforms in instruction time during the last decade, Austria, France and Italy are the only ones that did not at the same time reform the statutory annual teaching time of teachers. In these countries, unless the annual number of teaching hours for teachers or the class size are adjusted in the next years, the number of teachers needed to teach pupils should decrease (if other factors remain constant) and this will affect salary cost per student (the cost will decrease).

In the other countries – Belgium (Flemish Community), Hungary, the Netherlands, Norway and Portugal – a reform of the annual number of hours of instruction for students was coupled with a reform of the annual teaching time for teachers. In Belgium (Flemish Community), the Netherlands and Portugal, a decrease in the hours of instruction has been coupled with a decrease in the amount of teaching time for teachers, while in Norway an increase in hours

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of instruction has been combined with an increase in teaching time. Taken together, the two reforms have allowed these countries to maintain a relatively stable ratio of students to teachers over the last decade. If hours of instruction and teaching hours are changed in similar proportions, there would be no effect on the value (in USD) of salary cost per student unless teachers' salaries are also changed.

Hungary is an exception to this pattern, as the increase in the annual amount of teaching time for teachers in upper secondary education has been associated with a decrease in the number of hours of instruction for students. In theory, this means that fewer teachers are necessary (than in the past decade) to ensure the total number of hours of instruction at the upper secondary level of education. Unless there had been also a change in teachers' salaries, these reforms should have led to a decrease in salary cost per student.

There have been few reforms regarding class size and teachers' salaries during the last decade, which partly explains why these factors are often the main sources of differences with the OECD average in salary cost per student in primary and secondary education (see Box 7.3). However, Austria, Belgium (Flemish Community) (only schools at risks) and the Netherlands have reduced class sizes in primary and secondary education. Italy is the only country that slightly increased (by 0.4) the number of pupils per classroom in primary and secondary education. This should have led to an increase in salary cost per student in the first three countries and to a decrease in the last.

For teachers' salaries, countries' reforms differ sharply. Finland decided to set salaries on the basis of teachers' tasks rather than on the annual number of teaching hours, Belgium (Flemish Community) increased teacher' salaries in primary education to raise them to the same level as in lower secondary education, Italy gave schools more autonomy to set teacher's salaries, and the Netherlands and Portugal decreased the number of steps in teachers' careers, thereby shortening the progression in teachers' salaries. Unless other factors were also changed, these changes affected salary cost per student.

All these reforms have an impact on salary cost per student as shown in this indicator and can help to better understand the position of countries in the different tables and charts.

Salary cost per student relative to GDP per capita

The level of teachers' salaries in OECD countries varies according to countries' level of wealth. To account for differences in the countries' level of wealth when comparing salary costs per student, salary cost per student, as well as teachers' salaries, are divided by GDP per capita (on the assumption that GDP per capita is an estimate of countries' level of wealth). This makes it possible to compare countries' "relative" salary cost per student.

When differences in countries' wealth are controlled for, the comparison of relative salary cost per student shows a different picture (Tables B7.1, B7.2 and B7.3). Relative teachers' salaries are less often the main driver of the difference with the average level of relative salary cost per student. For example, at each of the three levels of education, Luxembourg is not the country with the highest level of salary cost per student relative to GDP per capita, whereas it has the highest levels of salary cost per student (expressed in USD). When comparing the salary cost to

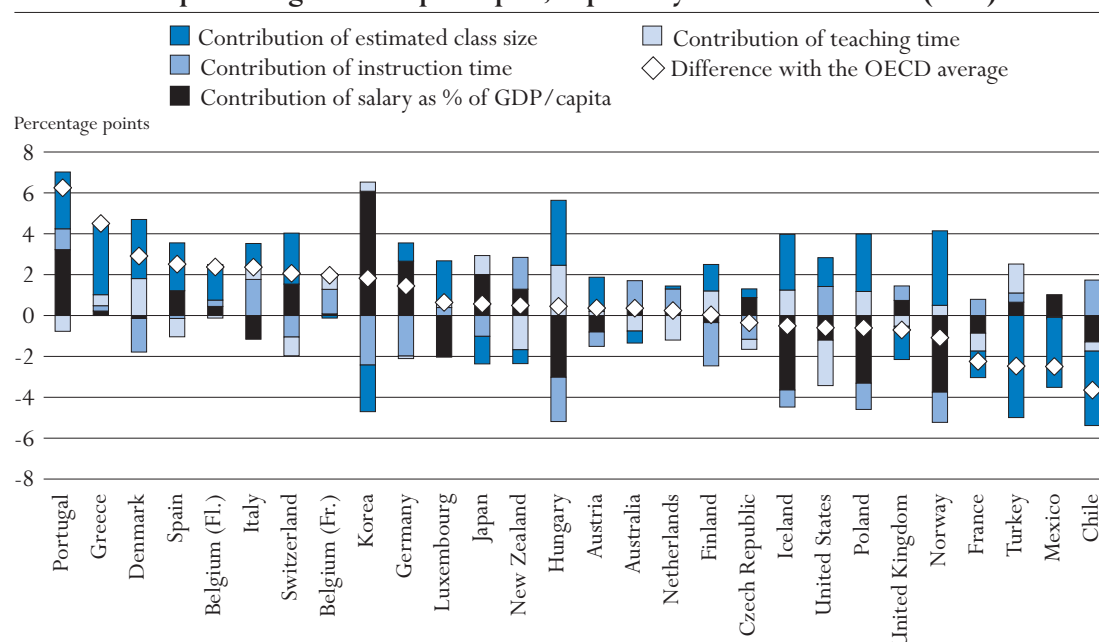
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the GDP per capita, teachers' salaries are no more the main driver of the difference with the OECD average in countries that have both high levels of teachers' salaries and GDP per capita compared to other countries (for example Luxembourg and Switzerland) and also in countries that have both low levels of teachers' salaries and GDP per capita compared to other countries (for example Chile, the Czech Republic and Turkey).

More in detail, at the primary level, of the four factors contributing to the relative salary cost per student, 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 13 out of the 28 OECD countries with available data. This is also the main driver of the difference in five of the seven countries with the highest salary costs per student (as a percentage of GDP per capita) and in six of the seven countries with the lowest salary costs per student (as a percentage of GDP per capita). The main driver of the difference with the OECD average varies more for countries with a salary cost per student (as a percentage of GDP per capita) that is closer to the OECD average (Box B7.3 and Table B7.1).

Among OECD countries, salary cost per student represents 7.4% of GDP per capita on average. The highest relative salary costs per student are found in Portugal (13.7%) followed by Greece (11.9%). In Portugal, the high level of relative salary cost per student compared to the OECD average still results partly from teachers' salaries. Above-average relative teacher's salaries (161% of GDP per capita against an average of 118%) contribute for 3.2 percentage points (the largest contribution of the four factors) to the difference with the average relative salary cost per student.

Chart B7.3. Contribution of various factors to salary cost per student as a percentage of GDP per capita, at primary level of education (2007)



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/eag2010).

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In Greece, the difference is mainly driven by class size. Lower than average class size (11.1 students per class against an average of 16.0) contributes for 3.5 percentage points to the difference with the average relative salary cost per student (Chart B7.3). The other three factors have minor positive effects on the difference with the OECD average relative salary cost per student: slightly higher than average relative teachers' salaries (120% of GDP per capita against 118%), slightly above-average hours of instruction for students (828 hours against 806 hours) and slightly below-average teaching hours for teachers (751 hours against 794 hours) contribute respectively for 0.2, 0.3 and 0.5 percentage point, respectively, to the difference with the OECD average relative salary cost per student (Table B7.1).

For lower secondary education, the main driver of the difference in relative salary cost per student compared to the OECD average is usually class size, but teaching time and/or teachers' salaries (relative to GDP per capita) also play a significant role (and sometimes the main one) in most countries. They definitely have more influence than at the primary level of education (Box B7.3 and Table B7.2).

On average among OECD countries, salary cost per student represents 9.3% of GDP per capita. The highest relative salary cost per student is found in Portugal (20.4%), followed by Greece (15.7%). Chile is still the country with the lowest relative salary cost per student (3.8%). In Portugal, the high level of relative salary cost per student compared to the OECD average still results partly from teachers' salaries (contribution of 3.7 percentage points) but is mainly driven by class size (contribution of 8.7 percentage points). For Chile, the main driver of the difference with the OECD average is also class size (contribution of -3.5 percentage points owing to an above-average class size of 31.2).

Relative to GDP per capita, countries' salary cost per student at upper secondary level of education varies a great deal, ranging from 3.8% of GDP per capita in Chile (less than half of the OECD average of 10.9%) to over five times that rate in Portugal and Spain (19.1% and 20.1% respectively, nearly twice the OECD average). In Portugal and Spain, relative salary cost per student is respectively 8.2 and 9.2 percentage points higher than the OECD average, a difference mainly driven by significantly below-average class size compared to other OECD countries (Table B7.3 and Box B7.3).

Teachers' salaries (as a percentage of GDP per capita) are the main driver of the deviation of relative salary cost per student from the OECD average in upper secondary education in 11 out of the 27 OECD countries for which data are available. In countries with the lowest relative salary costs per student at the upper secondary level, below-average teachers' salaries (relative to GDP per capita) are usually the main driver. This is the case in Iceland, Norway and Poland. 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.

The higher the level of education, the greater the impact of teachers' salaries and the lower the impact of class size on the difference with the OECD average relative salary cost per student. Examples are Austria, France, Hungary and Switzerland. In each of these countries, the main driver of the difference with the OECD average salary cost per student is relative teachers' salaries at upper secondary level whereas it is class size at primary level (Box B7.3).

Box B7.3. Main drivers of the difference with the OECD average salary cost per student as a percentage of GDP per capita, by level of education (2007)

	Primary education	Lower secondary education	Upper secondary education
Salary as % of GDP/capita	7 countries Germany (+), Iceland (-), Japan (+), Korea (+), Norway (-), Poland (-), Portugal (+)	8 countries Germany (+), Hungary (-), Iceland (-), Japan (+), Korea (+), Norway (-), Poland (-), Spain (+)	11 countries Austria (-), Belgium (Fr.) (+), France (-), Germany (+), Hungary (-), Iceland (-), Italy (-), Netherlands (+), Norway (-), Poland (-), Switzerland (+)
Instruction time	5 countries Australia (+), Belgium (Fr.) (+), Czech Republic (-), Finland (-), Italy (+)		1 country Greece (+)
Teaching time	3 countries Netherlands (-), New Zealand (-), United States (-)	6 countries Austria (+), Czech Republic (+), Italy (+), New Zealand (-), United Kingdom (-), United States (-)	4 countries Denmark (+), Japan (+), New Zealand (-), United States (-)
Estimated class size	13 countries Austria (+), Belgium (Fl.) (+), Chile (-), Denmark (+), France (-), Greece (+), Hungary (+), Luxembourg (+), Mexico (-), Spain (+), Switzerland (+), Turkey (-), United Kingdom (-)	13 countries Australia (+), Belgium (Fl.) (+), Belgium (Fr.) (+), Chile (-), Denmark (+), Finland (+), France (-), Greece (+), Luxembourg (+), Mexico (-), Netherlands (-), Portugal (+), Switzerland (+)	11 countries Australia (+), Belgium (Fl.) (+), Chile (-), Czech Republic (-), Finland (-), Korea (-), Luxembourg (+), Portugal (+), Spain (+), Turkey (-), United Kingdom (+)

Note: The positive or negative signs show whether the factor increases or decreases the salary cost per student as a percentage of GDP per capita.

Source: OECD, Tables B7.1, B7.2 and B7.3. See Annex 3 for notes (www.oecd.org/edu/eqg2009).

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Definitions and methodologies

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.

In most cases, the values for these variables are derived from *Education at a Glance 2009*, and refer to the school year 2006-07 and the calendar year 2006 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/eqg2010.

Table B7.1.

Contribution of various factors to salary cost per student at the primary level of education (2007)

Readers' guide: In Australia, at USD 2 778, the salary cost per student exceeds the OECD average by USD 471. Above-average salaries and above-average instruction time increase the difference from the OECD average by USD 490 and USD 431 respectively, whereas above-average teaching time and above-average estimated class size decrease the difference from the average by USD 254 and USD 197. The sum of these effects results in a positive difference from the OECD average of USD 471.

Contribution (in USD) of school factors to salary cost per student						
	Salary cost per student	Difference from the OECD average of USD 2 307	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in USD) of teachers' salary below/above the OECD average of USD 36 496	Effect (in USD) of instruction time (for students) below/above the OECD average of 806 hours	Effect (in USD) of teaching time (for teachers) below/above the OECD average of 794 hours	Effect (in USD) of estimated class size below/above the OECD average of 16.0 students per class
	(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
OECD countries						
Australia	2 778	471	490	431	-254	-197
Austria	2 749	442	56	-233	65	554
Belgium (Fl.)	3 296	988	364	100	-40	564
Belgium (Fr.)	3 159	852	241	388	251	-28
Chile	526	-1 781	-1 255	424	-108	-843
Czech Republic	1 555	-752	-430	-306	-129	112
Denmark	3 607	1 299	294	-543	596	953
Finland	2 433	126	5	-674	383	411
France	1 611	-697	-268	246	-273	-402
Germany	2 915	607	997	-636	-39	286
Greece	3 186	879	-355	75	155	1 004
Hungary	1 421	-886	-1 791	-542	630	817
Iceland	2 430	123	-899	-274	408	888
Ireland	m	m	m	m	m	m
Italy	2 876	568	-497	534	202	330
Japan	2 563	255	711	-322	293	-426
Korea	2 137	-171	929	-626	116	-590
Luxembourg	6 115	3 808	2 444	202	102	1 061
Mexico	658	-1 649	-893	-10	-10	-736
Netherlands	2 850	542	506	398	-410	49
New Zealand	2 124	-184	43	449	-480	-196
Norway	3 309	1 001	-15	-589	197	1 409
Poland	1 013	-1 295	-1 970	-309	288	696
Portugal	2 963	655	-120	260	-196	711
Slovak Republic	m	m	m	m	m	m
Spain	2 936	628	235	-43	-271	708
Sweden	m	m	m	m	m	m
Switzerland	3 662	1 355	1 176	-371	-323	873
Turkey	599	-1 709	-1 092	99	314	-1 030
United Kingdom	2 296	-11	461	231	-172	-531
United States	2 996	689	477	523	-830	519


Source: OECD. Data from *Education at a Glance 2009* (www.oecd.org/edu/eag2009). See Annex 3 for notes (www.oecd.org/edu/eag2010).
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Table B7.1. (continued)

Contribution of various factors to salary cost per student at primary level of education (2007)

Readers' guide: In Australia, at 7.8% of the GDP per capita, the salary cost per student exceeds the OECD average by 0.4 percentage point. Above-average salaries and above-average instruction time increase the difference from the OECD average by 0.4 and 1.3 percentage points, respectively, whereas an above-average teaching time and above-average class size decrease the difference from the average by 0.8 and 0.6 percentage point. The sum of these effects results in a positive difference from the OECD average of 0.4 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 the OECD average of 7.4% of GDP/capita	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in percentage points) of teachers' salary as % of GDP/capita below/above the OECD average of 118%	Effect (in percentage points) of instruction time (for students) below/above the OECD average of 806 hours	Effect (in percentage points) of teaching time (for teachers) below/above the OECD average of 794 hours	Effect (in percentage points) of estimated class size below/above the OECD average of 16.0 students per class
	(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
OECD countries						
Australia	7.8	0.4	0.4	1.3	-0.8	-0.6
Austria	7.8	0.4	-0.8	-0.7	0.2	1.7
Belgium (Fl.)	9.8	2.4	0.4	0.3	-0.1	1.7
Belgium (Fr.)	9.4	2.0	0.1	1.2	0.8	-0.1
Chile	3.8	-3.6	-1.3	1.7	-0.5	-3.6
Czech Republic	7.1	-0.4	0.9	-1.2	-0.5	0.4
Denmark	10.3	2.9	-0.1	-1.6	1.8	2.9
Finland	7.5	0.0	-0.3	-2.1	1.2	1.3
France	5.2	-2.2	-0.9	0.8	-0.9	-1.3
Germany	8.9	1.4	2.7	-2.0	-0.1	0.9
Greece	11.9	4.5	0.2	0.3	0.5	3.5
Hungary	7.9	0.5	-3.0	-2.2	2.5	3.2
Iceland	6.9	-0.5	-3.6	-0.8	1.2	2.7
Ireland	m	m	m	m	m	m
Italy	9.8	2.4	-1.2	1.8	0.7	1.1
Japan	8.0	0.6	2.0	-1.0	0.9	-1.3
Korea	9.3	1.8	6.1	-2.4	0.4	-2.3
Luxembourg	8.1	0.6	-2.0	0.4	0.2	2.1
Mexico	4.9	-2.5	1.0	0.0	0.0	-3.4
Netherlands	7.7	0.2	0.1	1.2	-1.2	0.1
New Zealand	7.9	0.5	1.3	1.6	-1.7	-0.7
Norway	6.3	-1.1	-3.7	-1.5	0.5	3.6
Poland	6.8	-0.6	-3.3	-1.3	1.2	2.8
Portugal	13.7	6.2	3.2	1.0	-0.8	2.8
Slovak Republic	m	m	m	m	m	m
Spain	9.9	2.5	1.2	-0.1	-0.9	2.3
Sweden	m	m	m	m	m	m
Switzerland	9.5	2.1	1.5	-1.1	-0.9	2.5
Turkey	5.0	-2.5	0.7	0.5	1.4	-5.0
United Kingdom	6.7	-0.7	0.7	0.7	-0.5	-1.6
United States	6.8	-0.6	-1.2	1.4	-2.2	1.4

Source: OECD. Data from *Education at a Glance 2009* (www.oecd.org/edu/eag2009). See Annex 3 for notes (www.oecd.org/edu/eag2010).


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Table B7.2.

Contribution of various factors to salary cost per student at lower secondary level of education (2007)

Contribution (in USD) of school factors to salary cost per student						
	Salary cost per student	Difference from the OECD average of USD 2 950	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in USD) of teachers' salary below/above the OECD average of USD 39 470	Effect (in USD) of instruction time (for students) below/above the OECD average of 944 hours	Effect (in USD) of teaching time (for teachers) below/above the OECD average of 720 hours	Effect (in USD) of estimated class size below/above the OECD average of 17.5 students per class
	(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
OECD countries						
Australia	3 722	773	432	212	-415	542
Austria	3 912	962	71	52	582	257
Belgium (Fl.)	4 534	1 585	195	64	150	1 176
Belgium (Fr.)	4 347	1 397	38	281	299	780
Chile	526	-2 424	-1 528	231	-277	-850
Czech Republic	2 376	-574	-809	-81	328	-11
Denmark	3 607	657	70	-155	343	400
Finland	3 970	1 020	-29	-451	673	828
France	2 385	-565	-386	313	349	-840
Germany	3 813	864	1 299	-228	-177	-30
Greece	4 187	1 237	-745	36	902	1 045
Hungary	1 416	-1 533	-2 151	-145	601	162
Iceland	2 430	-519	-1 220	-217	191	727
Ireland	m	m	m	m	m	m
Italy	3 495	546	-595	463	581	97
Japan	3 294	345	664	-263	572	-629
Korea	2 662	-287	960	-249	817	-1 816
Luxembourg	9 985	7 036	4 726	-1 187	698	2 798
Mexico	703	-2 246	-834	369	-610	-1 171
Netherlands	3 109	160	648	257	-126	-620
New Zealand	2 304	-646	-155	113	-775	171
Norway	3 569	619	-276	-437	316	1 016
Poland	896	-2 053	-2 207	-197	120	231
Portugal	4 426	1 476	-467	-156	-168	2 267
Slovak Republic	m	m	m	m	m	m
Spain	3 818	869	424	43	32	369
Sweden	m	m	m	m	m	m
Switzerland	5 065	2 115	1 791	-138	-717	1 180
Turkey	a	a	a	a	a	a
United Kingdom	2 667	-283	339	-31	-485	-106
United States	2 995	46	331	115	-1 233	833


Source: OECD. Data from *Education at a Glance 2009* (www.oecd.org/edu/eag2009). See Annex 3 for notes (www.oecd.org/edu/eag2010).StatLink  <http://dx.doi.org/10.1787/888932310396>

Table B7.2. (continued)

Contribution of various factors to salary cost per student at lower secondary level of education (2007)

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 the OECD average of 9.3% of GDP/capita	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in percentage points) of teachers' salary as % of GDP/capita below/above the OECD average of 124%	Effect (in percentage points) of instruction time (for students) below/above the OECD average of 944 hours	Effect (in percentage points) of teaching time (for teachers) below/above the OECD average of 720 hours	Effect (in percentage points) of estimated class size below/above the OECD average of 17.5 students per class
	(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
OECD countries						
Australia	10.4	1.1	0.1	0.6	-1.2	1.6
Austria	11.1	1.8	-0.9	0.2	1.7	0.8
Belgium (Fl.)	13.5	4.2	0.0	0.2	0.5	3.6
Belgium (Fr.)	12.9	3.6	-0.5	0.9	0.9	2.4
Chile	3.8	-5.5	-1.8	0.9	-1.1	-3.5
Czech Republic	10.8	1.5	0.6	-0.3	1.2	0.0
Denmark	10.3	1.1	-0.7	-0.5	1.0	1.2
Finland	12.2	2.9	-0.4	-1.4	2.1	2.6
France	7.7	-1.6	-1.0	1.0	1.1	-2.7
Germany	11.6	2.3	3.7	-0.7	-0.5	-0.1
Greece	15.7	6.4	-0.4	0.1	3.1	3.6
Hungary	7.9	-1.4	-3.8	-0.6	2.3	0.6
Iceland	6.9	-2.4	-4.5	-0.7	0.6	2.2
Ireland	m	m	m	m	m	m
Italy	11.9	2.6	-1.1	1.5	1.9	0.3
Japan	10.3	1.0	2.0	-0.8	1.8	-2.0
Korea	11.5	2.2	7.1	-0.9	3.1	-7.0
Luxembourg	13.2	3.9	-0.5	-2.1	1.3	5.3
Mexico	5.3	-4.0	2.7	1.6	-2.8	-5.5
Netherlands	8.4	-0.9	0.5	0.7	-0.4	-1.8
New Zealand	8.6	-0.7	1.0	0.4	-2.7	0.6
Norway	6.8	-2.4	-4.7	-1.1	0.8	2.6
Poland	6.0	-3.3	-3.8	-0.8	0.5	0.9
Portugal	20.4	11.1	3.7	-0.6	-0.7	8.7
Slovak Republic	m	m	m	m	m	m
Spain	12.9	3.6	2.2	0.1	0.1	1.2
Sweden	m	m	m	m	m	m
Switzerland	13.1	3.8	2.9	-0.4	-2.0	3.3
Turkey	a	a	a	a	a	a
United Kingdom	7.8	-1.5	0.4	-0.1	-1.5	-0.3
United States	6.8	-2.5	-1.7	0.3	-3.3	2.3


Source: OECD, Data from Education at a Glance 2009 (www.oecd.org/edu/eag2009). See Annex 3 for notes (www.oecd.org/edu/eag2010).StatLink  <http://dx.doi.org/10.1787/888932310396>

Table B7.3.

Contribution of various factors to salary cost per student at upper secondary level of education (2007)

Contribution (in USD) of school factors to salary cost per student						
	Salary cost per student	Difference from the OECD average of USD 3 449	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in USD) of teachers' salary below/above the OECD average of USD 42 303	Effect (in USD) of instruction time (for students) below/above the OECD average of 984 hours	Effect (in USD) of teaching time (for teachers) below/above the OECD average of 655 hours	Effect (in USD) of estimated class size below/above the OECD average of 18.4 students per class
	(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
Australia	3 722	273	219	35	-780	800
Austria	3 760	311	-72	236	388	-241
Belgium (Fl.)	5 239	1 790	984	-104	68	842
Belgium (Fr.)	5 038	1 589	799	153	352	285
Chile	528	-2 921	-1 732	371	-468	-1 092
Czech Republic	2 529	-920	-912	138	226	-372
Denmark	4 406	957	622	-229	2 381	-1 816
Finland	2 711	-738	54	-229	547	-1 109
France	3 603	154	-728	529	207	147
Germany	4 376	927	1 521	-375	-339	118
Greece	4 368	919	-1 097	1 187	735	94
Hungary	1 502	-1 947	-2 009	297	421	-656
Iceland	3 164	-285	-904	-341	526	434
Ireland	m	m	m	m	m	m
Italy	3 138	-312	-744	338	286	-192
Japan	3 913	464	526	-464	1 016	-615
Korea	3 373	-76	916	130	1 111	-2 234
Luxembourg	9 985	6 536	4 693	-1 840	133	3 549
Mexico	m	m	m	m	m	m
Netherlands	4 024	574	1 513	163	-512	-590
New Zealand	2 804	-646	-407	5	-1 172	928
Norway	3 943	494	-333	-522	841	507
Poland	912	-2 537	-2 558	-232	-71	324
Portugal	4 141	692	-754	-469	-166	2 081
Slovak Republic	m	m	m	m	m	m
Spain	5 931	2 481	369	-23	-259	2 394
Sweden	m	m	m	m	m	m
Switzerland	6 903	3 454	2 702	216	-143	680
Turkey	971	-2 478	-1 914	-405	313	-472
United Kingdom	3 937	487	191	-130	-1 001	1 428
United States	2 812	-637	124	-11	-1 586	837


Source: OECD. Data from *Education at a Glance 2009* (www.oecd.org/edu/eag2009). See Annex 3 for notes (www.oecd.org/edu/eag2010).StatLink  <http://dx.doi.org/10.1787/888932310396>

Table B7.3. (continued)

Contribution of various factors to salary cost per student at upper secondary level of education (2007)

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 the OECD average of 10.9% of GDP/capita	Contribution of the underlying factors to the difference from the OECD average			
				Effect (in percentage points) of teachers' salary as % of GDP/capita below/above the OECD average of 133%	Effect (in percentage points) of instruction time (for students) below/above the OECD average of 984 hours	Effect (in percentage points) of teaching time (for teachers) below/above the OECD average of 655 hours	Effect (in percentage points) of estimated class size below/above the OECD average of 18.4 students per class
				(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)
OECD countries	Australia	10.4	-0.4	-0.6	0.1	-2.3	2.4
	Austria	10.7	-0.2	-1.4	0.7	1.2	-0.7
	Belgium (Fl.)	15.6	4.7	2.2	-0.3	0.2	2.6
	Belgium (Fr.)	15.0	4.1	1.7	0.5	1.1	0.9
	Chile	3.8	-7.1	-2.2	1.5	-1.9	-4.5
	Czech Republic	11.5	0.6	0.7	0.5	0.8	-1.4
	Denmark	12.6	1.8	0.7	-0.7	7.2	-5.4
	Finland	8.3	-2.6	-0.1	-0.7	1.7	-3.4
	France	11.6	0.7	-2.1	1.7	0.7	0.5
	Germany	13.3	2.4	4.3	-1.2	-1.0	0.4
	Greece	16.4	5.5	-1.4	4.1	2.5	0.3
	Hungary	8.3	-2.5	-2.7	1.1	1.6	-2.6
	Iceland	9.0	-1.9	-3.7	-1.0	1.6	1.3
	Ireland	m	m	m	m	m	m
	Italy	10.7	-0.2	-1.6	1.1	0.9	-0.6
	Japan	12.2	1.3	1.5	-1.5	3.2	-1.9
	Korea	14.6	3.7	7.7	0.5	4.2	-8.6
	Luxembourg	13.2	2.3	-1.5	-3.4	0.2	6.9
	Mexico	m	m	m	m	m	m
	Netherlands	10.8	0.0	2.7	0.5	-1.5	-1.7
	New Zealand	10.5	-0.4	0.4	0.0	-4.0	3.2
	Norway	7.6	-3.3	-5.4	-1.3	2.2	1.3
	Poland	6.1	-4.7	-4.8	-0.9	-0.3	1.3
	Portugal	19.1	8.2	2.8	-1.8	-0.6	7.9
	Slovak Republic	m	m	m	m	m	m
	Spain	20.1	9.2	2.3	-0.1	-0.8	7.8
	Sweden	m	m	m	m	m	m
	Switzerland	17.9	7.0	4.9	0.6	-0.4	1.9
Turkey	8.0	-2.8	-0.2	-1.8	1.4	-2.1	
United Kingdom	11.5	0.7	-0.3	-0.4	-3.0	4.3	
United States	6.4	-4.5	-2.5	0.0	-4.3	2.3	

Source: OECD. Data from *Education at a Glance 2009* (www.oecd.org/edu/eag2009). See Annex 3 for notes (www.oecd.org/edu/eag2010).


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Table B7.4.
Main reforms implemented between 1995 and 2010 on the four factors
used to calculate salary cost per student

	Salary of teachers (statutory salaries)	Annual amount of instruction time for students	Annual teaching time for teachers (in public institutions)	Class size or ratio of students to teaching staff
OECD countries				
Australia	There have been no substantial policy reforms directly on teachers' salaries at the national level over the previous ten years that can be identified as affecting Indicator B7 directly. However, under the recent Teacher Quality National Partnership Agreement, the Commonwealth government is working with state and territory governments on a range of reforms to improve the quality of teaching and school leadership in schools. These reforms will include improvements to teacher pay to reward quality teaching and improve reward structures for teachers and leaders who work in disadvantaged indigenous, rural/remote and hard-to-staff schools. These reforms are still in the early stages and it is not yet possible to determine how they will affect teachers' salaries.	There was no reform in this area.	There was no reform in this area.	There have been no substantial policy reforms directly concerning class sizes at the national level over the previous ten years that can be identified as affecting the indicator directly. However, several states/territories have made resourcing commitments to help improve class sizes within their state/territory.
Austria	There was no reform in this area.	Decrease in instruction time for students. Beginning with the school year 2003-04, the number of teaching periods was reduced by 2 periods per class (ISCED 3) and 1.5 periods per class (on average, ISCED 2). The number of teaching periods is stipulated in the various curricula which are federal ordinances enacted by the Ministry of Education. As a consequence, public expenditure on teacher salaries decreased.	There was no reform in this area.	Beginning with the school year 2007-08, the maximum number of pupils per class was reduced by five in schools at ISCED 1 and 2. At ISCED 1 (primary schools) and ISCED 2 (<i>Hauptschulen</i> : general secondary schools) the regional provinces were responsible for amending the respective regional School Organisation Acts. In respect of ISCED 2 (<i>Allgemein bildenden höhere Schulen</i> : academic secondary schools) the Federal School Organisation Act was amended. At ISCED 3 the maximum number of pupils per class was left unchanged. However, possibilities for splitting classes into small groups were enlarged for certain subjects. As a result expenditure on teacher salaries will rise considerably up to 2010-11.
Belgium (Flemish Community)	Identical teacher's salaries in primary and lower secondary education. Before September 2000, the statutory salary was different for teachers in ISCED 1 and ISCED 2. Since 1 September 1999 the statutory salary of these two types of teachers gradually became the same. The implementation was completed on 1 September 2004.	Since September 2001, the maximum annual instructional hours in secondary education has been set at 1 200 hours.	Since September 1997, the weekly teaching time for teachers in primary education has been a maximum of 27 hours of 50 minutes (previously 28 hours of 50 minutes). Similar reforms were introduced in 1989 in secondary education.	As of 1 September 2002, there was an integrated support provision for children from deprived backgrounds for equal opportunities in education. Extra support for additional needs in schools has been made available. The support is aimed at schools that have a rather large number of pupils with certain socio-economic indicators. This extra support consists in additional teaching periods. Compared to 2002, about 1.7% additional teaching hours have been awarded on this basis to schools in regular secondary education.

Table B7.4. (continued-1)

**Main reforms implemented between 1995 and 2010 on the four factors
used to calculate salary cost per student**

OECD countries		Salary of teachers (statutory salaries)	Annual amount of instruction time for students	Annual teaching time for teachers (in public institutions)	Class size or ratio of students to teaching staff
	Czech Republic	Statutory rule 469/2002 Sb, subsequently amended: The salary scales have 16 categories (according to the complexity of work) and 12 steps (according to the length of service). The tariffs in the scale valid for the remuneration of teachers overrides those in the basic scale, but are lower than in the scale for some other groups of employees, <i>e.g.</i> in the health service. All teachers who are fully qualified are entitled to salary advancement within the salary scale, irrespective of the type of contract or the form of the employment relationship. Educational staff are placed in the range between 8th and 13th categories, with the 14th category being used for educational staff only in exceptional circumstances. Statutory rules 74/2009 Sb.: Non-pedagogical staff has been included in salary scales of pedagogical staff (salaries of non-pedagogical staff increased).	The reform of curricula (transfer to Framework Educational Programme [FEP]) which started in 2005 will be implemented from 2007-08 to 2011-12 in primary and secondary education. Substantial changes were done in the timetable of FEP, <i>e.g.</i> more hours are flexible. The FEP sets key competences, outputs of educational areas composed of educational fields, which are compulsory, and recommended content of education. It also sets the cross-curricular topics. The school educational programmes set the individual subjects – the subjects can be the same as the educational fields and cross-curricular topics, they can integrate the fields/topics or the fields can be divided into more subjects. The form of modules or courses can also be used. The outputs must be fulfilled and the time allocated to individual educational areas/fields must be observed. All schools must teach according to their school educational programme.	Since 2005: Headmasters can increase the number of teaching hours for teacher of 3 hours per week (within a limit of 24 hours per week).	There was no reform in this area.
	Finland	A new salary system has been implemented for education staff since 2007. Earlier salaries were based on the number of teaching hours and years of service. In the new system the salaries are based on the tasks and their requirements and the results of the work, the professionalism of the staff and work experience. In addition a bonus can be paid based on the results of the institution. There is also room for local flexibility in the salary system. The Trade Union of Education hopes that employers, that is, local authorities, will make more frequent use of this opportunity to pay their employees more than the minimum salaries determined in national agreements. It is too early to determine the quantitative impact of the new salary system.	Since 1 August 2001, all programmes leading to upper secondary vocational qualifications take three years to complete and comprise 120 credits (one credit is equal to 40 hours of students' average workload). Before that, the completion of an initial vocational qualification took 2-3 years. In 1999, slightly less than one-third of students started in study programmes lasting 2 or 2.5 years. The distribution of lesson hours in general upper secondary education was also reformed by a Government Decree in 2002, which did not change the minimum total number of students' courses.	The conditions of service for teachers, including teaching time, are agreed in a collective bargaining process and in the relevant legislation (length of school year, etc.). Most teachers' working hours are based on teaching duties. In some fields of vocational upper secondary education and training, teachers have overall teaching/working hours. This was introduced in different years in different fields.	There was no reform in this area.
	France	There was no reform in this area.	At the start of the 2008 school year, a new organisation of the school week was introduced in primary schools. Saturday morning classes were removed. The school week is now composed of 24 hours of teaching over four days (Monday, Tuesday, Thursday and Friday), or nine half-days including Wednesday mornings. The maximum duration of a school day is still six hours. When the need arises, pupils may receive two hours of tutoring per week by a teacher (in the school), on top of the 24 hours of regular classes. The school year now has 864 hours of instruction instead of 962 hours previously.	There was no reform in this area.	There was no reform in this area.
	Hungary	There was no reform in this area.	In 2004-05 a modified National Core Curriculum was introduced at grade 1. From 2003-04 new (also recommended) frame curricula with fewer lessons were introduced in grades 5, 9 and 10. In 2005-06 this curriculum was extended to grades 3 and 7. Altogether, the changes resulted in an 8-10% decrease in the amount of compulsory instruction time.	Since 2006: Increase in the number of compulsory hours of teaching from 20 to 22 at ISCED 2 and 3. The change resulted in a 10% increase in teachers' compulsory teaching time.	There was no reform in this area.
	Italy	More autonomy for schools to set teacher's salaries. The salary is made up of basic and additional compensation. The increase for both parts is defined on the basis of the price index. Owing to the law on autonomy, from 2000 the additional salary is assigned according to criteria defined at the level of the school.	Establishment of the minimum and maximum number of instruction hours in 2005 and 2009.	There was no reform in this area.	In 2006: Increase of 0.40 in the average number of students per class in primary and secondary education. Since 2009, no fewer than 15 and at most 25 in primary education, no fewer than 18 and at most 25 in lower secondary, and no fewer than 27 in upper secondary education.

Table B7.4. (continued-2)
Main reforms implemented between 1995 and 2010 on the four factors
used to calculate salary cost per student

	Salary of teachers (statutory salaries)	Annual amount of instruction time for students	Annual teaching time for teachers (in public institutions)	Class size or ratio of students to teaching staff	
OECD countries	Mexico	There was no reform in this area.	There was no reform in this area.	There was no reform in this area.	
	Netherlands	Reduction of career line: in 2000 with 2 steps (years), in 2001 with three steps, in 2002 with two steps. At that moment (in 2002) the career line had 18 steps. This reduction cost about EUR 100 million and EUR 60 million in primary and secondary education, respectively. Teachers with the maximum salary will get an extra allowance of EUR 1 850 and EUR 1 000 in primary and secondary education, respectively.	Reduction of instruction time from 1 067 to 1 040 and finally to 1 000 hours in 2009 in lower secondary education.	Reduction of teaching time from 867 hours in 2001 to a maximum of 750 hours in 2009. School boards for secondary education have a high degree of autonomy on decision making, including on teaching time. Since 2004, the collective labour agreement no longer contains formal regulations on teaching time for teachers in secondary education. In the past there was a maximum of 750 (or 867) clock hours a year. In the new collective labour agreement 2008-10 teacher unions and the employers organisation for secondary education have noted that the maximum teaching time should be 750 clock hours again, with commencing date 1 August 2009. From that date, the individual (full time) teacher yearly has the right to exchange 24 hours of teaching time for other school activities or payment. In addition to this, an analysis on the integral work force count of teachers in secondary education (IPTO-VO) has shown that, converted to the average of a full time teacher, teaching time is 690 clock hours, assuming that the number of weeks a teacher teaches per annum is 38.5.	Investments in reduction of class size. Reduction of pupil to teacher ratio from 18.6 in 2000 to 16.2 in 2008 (special education excluded). Growth in the number of teacher aides from 5 000 FTE in 2002 to 8 000 FTE in 2007.
	Norway	The first deal between the government and teacher unions was signed in May 2000 (<i>skolepakke 1</i>) and the second in October 2001 (<i>skolepakke 2</i>). Teachers were awarded two pay grades from 1 August 2000 in the first deal, and three pay grades in the second deal (three pay grade from 1 January 2002 and two pay grades from August 2002). The total increase of five pay grades was equivalent to approximately an 8% increase in salaries.	Increase of 3 hours a week (85.5 hours a year) in reading, writing and literature at grades 1-4 in 2002, increase of 3 hours a week (85.5 hours a year) in reading, writing and literature and 2 hours a week (57 hours a year) in mathematics at grades 1-4 in 2004, increase of 1 hour a week (28.5 hours a year) in mathematics, science, social studies and modern foreign languages at grades 1-4 in 2005, increase of 76 hours a year in mathematics and reading, writing and literature, and 38 hours in modern foreign languages at grades 1-4 in 2008, increase of 76 hours a year in physical education at grades 5-7 in 2009 and increase of 38 hours a year at any subject or grade according to school owners' assessment in 2010.	1 hour increase in teaching hours per week in primary school was included in the second deal (<i>skolepakke 2</i>). 1 % increase from 1 January 2002, and 3 % increase from 1 August 2002 (4% = 1 hour).	Norway used to have a fairly rigid system, with permanent classes and a maximum number of students per class, depending on the age of the students (28 per class in primary school – grades 1-7, 30 in lower secondary – grades 8-10, and in upper secondary, 15 in professionally oriented upper secondary). In 2003, this system was abandoned. The system of classes and maximum numbers was replaced by a more liberal system which conferred a large degree of discretionary power on the municipalities. The key words are “justifiable”, “pedagogy”, and “security”. A condition of the introduction of this system was that the municipalities might not use it to save money.

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Table B7.4. (continued-3)

**Main reforms implemented between 1995 and 2010 on the four factors
used to calculate salary cost per student**

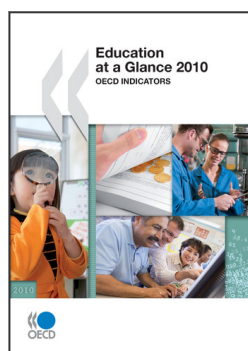
	Salary of teachers (statutory salaries)	Annual amount of instruction time for students	Annual teaching time for teachers (in public institutions)	Class size or ratio of students to teaching staff
Portugal	1999, 2007 and 2009: Revision of the salaries and years to go from minimum to maximum salary.	Reorganisation of (upper) secondary education. The total compulsory flexible curriculum increased from 2 disciplines (6 classes per week) to 3 disciplines (9 classes per week) and 205.2 sessions (307.8 hours) to 307.8 sessions (461.7 hours) per year, respectively. Consequently, the total intended curriculum increased from 581.4 sessions (872.1 hours) to 615.6 sessions (923.4 hours).	Changes to the Teacher's Career Statute. The Decree-Law nr. 15/2007 increased the number of teaching hours per week in upper secondary education from 20 hours per week to 22 hours per week (respectively, an increase in the number of hours a teacher teaches per year from 684 hours per year to 752.4 hours per year).	There was no reform in this area.
Spain	New Education Act passed 3 May 2006, implemented from 2007-08 to 2010-11. The reforms established by this Act do not affect the subjects included in this survey. These subjects remain the same as those in the Teachers and Curriculum Survey 2009.			
Sweden	There have been no reforms/changes since 2000 in Swedish education policy with consequences for the factors used in the analysis for Indicator B7.			
Switzerland	According to this important feature of federally-organised Switzerland, teachers' salaries, the annual hours of instruction time for students and the annual hours of teaching time for teachers are determined by each Canton individually. In the context of the questions on metadata for Indicator B7, this means that there are no reforms that are valid on the national level. There have been relevant reforms in the last ten years in single Cantons, but their impact affects only some Swiss teachers and/or students. In the Canton of St. Gall, for example, the total instruction time in primary school (6 years) increased from 5 100 to 5 460 hours between 1998 and 2008. But primary school students in St. Gall represent only about 7 % of total Swiss primary school students (and 8% of teachers).			
United Kingdom	<p>Between 1999 and April 2002, starting pay for teachers in England and Wales was based on a nine-point scale. They were then able to progress to a post-threshold higher five-point scale.</p> <p>From September 2002 the pay scales were revised (shortened) to the current main (six-point) and upper (three-point) scales.</p> <p>A review in November 2003 led to the introduction of new (higher) pay scales for those working in outer London and the Fringe (around London). Management allowances were also reformed.</p> <p>Scotland: A new pay structure was introduced in 2002 following a review in 2000.</p>	<p>The school year in England consists of 380 half-day sessions; one in the morning between around 9 am and 12 noon, the other in the afternoon usually between 1 pm and 3:30 pm. There is no fixed number of lessons per week.</p> <p>Recommended minimum weekly lesson times (excluding breaks) are: 21 hours for 5-7 year-olds; 23.5 hours for 7-11 year-olds; 24 hours for 11-14 year-olds; and 25 hours for 14-16 year-olds.</p>	<p>Teachers are contracted to work 1 265 hours per year. There is no statutory amount of teaching time within this total number of hours.</p> <p>From 1 September 2005, all teachers at a school (including head teachers) with timetabled teaching commitments have a contractual entitlement to guaranteed planning, preparation and assessment time for a minimum of at least 10% of their timetabled teaching time.</p> <p>Scotland: An annual working week of 35 hours was introduced from August 2001, with class contact time reduced in stages, ultimately to 22.5 hours per week in 2006.</p>	<p>The (English) government pledged in its 1997 election manifesto to limit the size of classes for 5, 6 and 7 year-olds to no more than 30 pupils.</p> <p>The School Standards and Framework Act placed a duty on schools to limit the size of classes for 5, 6 and 7 year-olds taught by one qualified teacher to 30 or fewer pupils. The limit became a statutory duty from September 2001, the start of the 2001-02 school year.</p> <p>Scotland: A 1999 regulation limited class sizes in the first three years of primary school (P1, P2 and P3) to a maximum of 30 from August 1999, August 2000 and August 2001, respectively. The limit was reduced to 25 in 2007-08 (Government Circular 1-2007). (Other primary classes have a limit of 33.) In secondary, Maths and English classes were reduced to a maximum of 20 pupils by Government Circular 1/2007.</p>

Table B7.4. (continued-4)
**Main reforms implemented between 1995 and 2010 on the four factors
 used to calculate salary cost per student**

	Salary of teachers (statutory salaries)	Annual amount of instruction time for students	Annual teaching time for teachers (in public institutions)	Class size or ratio of students to teaching staff
OECD countries	United States Teachers' salaries in the United States are determined by individual states and districts.	State requirements for the number of instructional days and hours per year vary. While there is no national standard, the general trend since 1980 has been to increase instructional time (ECS, Zaleski and Colasanti, June 2008, www.ecs.org/html/educationIssues/ECSStateNotes.asp?nlssueID=102v). National average is 180 school days per year.	State and district requirements on the number of teaching hours within public institutions vary. Additionally, hours per school day vary among states.	There are no nationally set guidelines on student to teacher ratios. NCLB-Title II Teacher Quality Block Grants may be used to reduce class size, but do not legislate what is required (www.ed.gov/offices/OESE/ClassSize/index.html). Some districts, such as New York City, have negotiated caps with the local teachers unions.
Partner country	Brazil In 2007 a law created the Fund for Development of Basic Education and Teaching Valuation (Fundeb). This fund's resources were destined to state and municipal teaching nets based on the number of students enrolled in ISCED 0, 1, 2 and 3. At least 60% of the total annual resources of this fund, in each state and in the Federal District, must be destined for the payment of professionals who are acting in ISCED 0, 1, 2 and 3. A law of 2008 establishes a minimum national salary to teachers of ISCED 0, 1, 2 and 3.	There was no reform in this area.	There was no reform in this area.	There was no reform in this area.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eqg2010).
 StatLink  <http://dx.doi.org/10.1787/888932310396>

B7



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