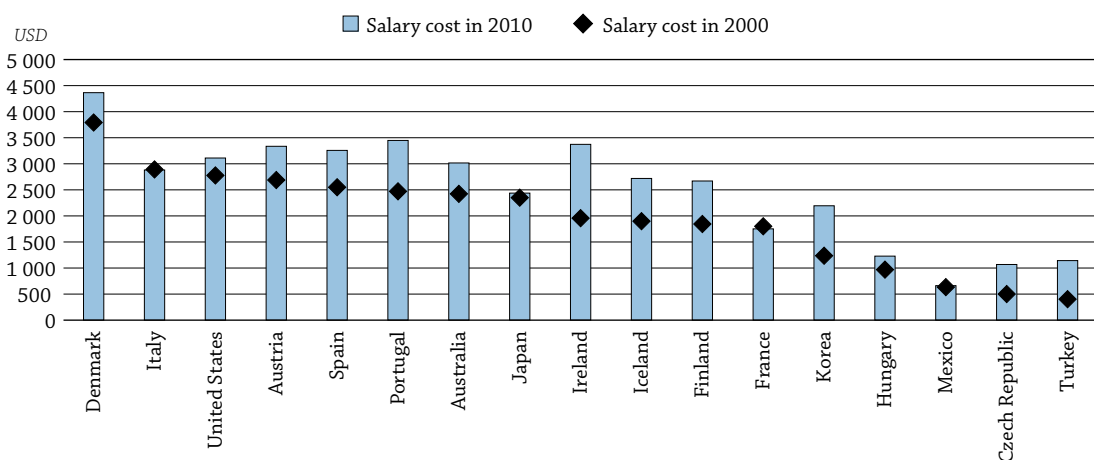


WHICH FACTORS INFLUENCE THE LEVEL OF EXPENDITURE?


- Four factors influence expenditures on education related to the per student salary cost of teachers: instruction time of students, teaching time of teachers, teachers' salaries and estimated class size. Consequently, a given level of teachers' salary cost per student may result from different combinations of these four factors.
- There are large differences in the salary cost of teachers per student between countries. In 2010, the salary cost of teachers per student varied by a ratio of 1 to 14 or 15 at the primary, lower secondary and upper secondary levels of education.
- The salary cost of teachers per student increased substantially between 2000 and 2010 at the primary and lower secondary levels of education in most countries. On average, it increased by one-third and one-quarter, respectively, among countries with available data in both years: from USD 1 733 to USD 2 307 at the primary level, and from USD 2 273 to USD 2 856 at the lower secondary level.
- France and Italy are the only countries where the salary cost of teachers per student decreased (slightly) between 2000 and 2010.

Chart B7.1. Change (in USD) in the salary cost of teacher per student at the primary level of education (2000, 2010)



Countries are ranked in descending order of the salary cost of teacher per student in 2000.

Source: OECD, Table B7.2. See Annex 3 for notes (www.oecd.org/edu/eag2012).

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Context

The relationship between the resources devoted to education and the outcomes achieved has been a significant area of focus among governments as they seek to provide more and better education for their populations. At the same time, given the increasing pressure on public budgets, there is intense interest in ensuring that public funding is directed so as to achieve the desired outcomes as efficiently as possible.

Teachers' compensation is usually the largest part of expenditure on education and thus of expenditure per student. It is a function of the instruction time of students, the teaching time of teachers, teachers' salaries and the number of teachers needed to teach students, which depends on estimated class size (Box B7.1). Differences among countries in these four factors may explain differences in the level of expenditure per student. Similarly, a given level of expenditure

may result from a different combination of these factors. This indicator examines the choices countries make when investing their resources in primary and secondary education and explores how changing policy choices between 2000 and 2010 relating to these four factors affected the level of salary cost of teachers.

■ Other findings

- **Similar levels of expenditure among countries 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. For example, at the upper secondary level of education, Germany and Spain have similar levels of salary costs of teachers per student, both higher than the average. However, this mainly results from higher-than-average salaries of teachers in Germany, whereas in Spain, it results from the combination of below-average estimated class size, above-average instruction time and above-average salaries of teachers.
- **Teachers' salaries are most often the main driver** of the difference from the average salary cost of teachers per student at each level of education. **Estimated class size is the second main driver** of the difference at each level.
- Comparing salary cost to GDP per capita is a way to account for differences in country wealth. **Teachers' salaries (as a percentage of GDP per capita) are less often the main driver of the difference from the average salary cost of teachers per student when that cost is compared to GDP per capita.**
- **The increase in the salary cost of teachers per student as the level of education increases is mainly influenced by decreases in the numbers of hours teachers are required to teach, followed by increases in the number of hours of instruction that students receive.** Increases in teachers' salaries between different levels of education play a minor role compared to these other two factors. Increasing class sizes as the level of education increases counterbalances the effect of the three other factors on the salary cost of teachers per student.

■ Trends

The increase in the salary cost of teachers per student between 2000 and 2010 has mostly been influenced by the changes in two factors: teachers' salaries and estimated class size. Between 2000 and 2010, among countries with available data in both years, teachers' salaries increased on average by about 16% at the primary level and 14% at lower secondary level, while estimated class sizes decreased on average by 14% at the primary level and by 7% at the lower secondary level.

At the primary level, most countries simultaneously increased teachers' salaries and decreased the estimated class size between 2000 and 2010. The impact of the change in teachers' salaries on the salary cost is usually larger than the impact of the change in estimated class size, even if it varies between countries. At the lower secondary level, most countries also increased teachers' salaries and decreased the estimated class size between 2000 and 2010, and the effect of these changes on the per student teacher salary cost is usually of a similar magnitude.

Some countries introduced reforms between 2000 and 2010 that affected the salary cost of teachers per student. For instance, Austria's decision to slightly decrease the instruction time of students at the secondary level (from school year 2003-04) resulted in a decrease of the public funds devoted to the salaries of teachers. In Hungary, teaching time was increased at the secondary level in 2006. This increased the number of teachers necessary for teaching students at this level, which increased expenditure on teachers' salaries. Reforms on class size were also taken in Italy to increase slightly the number of students per classroom. This resulted in a decrease in the salary cost of teachers per student.

Analysis

The salary cost of teachers per student

Per-student expenditure reflects the structural and institutional factors that relate to the organisation of schools and curricula. Expenditure can be broken down into the compensation of teachers and other expenditure (defined as expenditure for all purposes other than teacher compensation). Teacher compensation usually constitutes the largest part of expenditure on education. As a result, the level of teacher compensation divided by the number of students (referred to here as “salary cost of teachers per student”) is the main proportion of expenditure per student.

Box B7.1. Relationship between salary cost of teachers 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 to measure the extent of their effects is to compare the differences between national figures and the OECD average. This analysis computes the differences in expenditure per student among countries and the OECD average, and then calculates the contribution of these different factors to the variation from 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 the following calculation:

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

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

instT: instruction time of students (estimated as the annual intended instruction time, in hours, 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 the upper secondary level, as class size is 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, an “estimated” class size or proxy class size is computed based on the ratio of students to teaching staff and the number of teaching hours and instruction hours (Box D2.1). As a proxy, this estimated class size should be interpreted with caution.

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).

To account for differences in countries’ level of wealth when comparing salary costs per student, salary cost per student, as well as teachers’ salaries, can be 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 (see *Education at a Glance* 2012 tables, available on line).

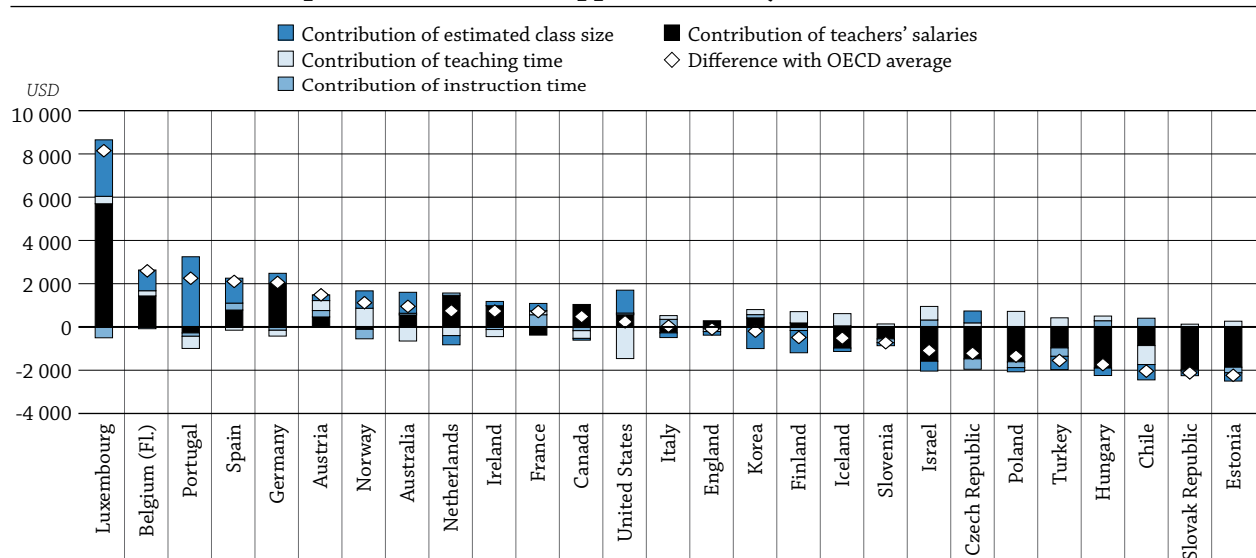
The compensation of teachers is a function of the instruction time of students, the teaching time of teachers, teachers' salaries and the number of teachers needed to teach students, which depends on estimated class size (Box B7.1). As a consequence, differences among countries in these four factors may explain differences in the level of expenditure. In the same way, a given level of expenditure may result from a different combination of these factors.

Differences in the salary cost of teachers per student result from differences in the combination of factors

There are large differences in the salary cost of teachers per student between countries. In 2010, the salary cost of teachers per student varied by a ratio of 1 to 14 at the primary level (USD 662 in Mexico to USD 9 404 in Luxembourg), 1 to 15 at the lower secondary level (USD 729 in Mexico to USD 11 145 in Luxembourg) and 1 to 15 at the upper secondary level (USD 758 in Estonia to USD 11 145 in Luxembourg).

This results from the fact that the four factors vary largely between countries. At the primary, lower secondary and upper secondary levels, the salary of teachers is the factor that varies the most between countries, and instruction time is the factor that varies the least between countries (Tables B7.1a, B7.1b and B7.1c). At the upper secondary level of education, the salary cost of teachers per student varies from less than 1 000 USD in Chile, Estonia and the Slovak Republic to more than USD 11 000 in Luxembourg. These large variations are explained by significant differences in the four factors between countries. For instance, the annual teachers' salary varies by a ratio of 1 to 8 (from USD 12 576 in Estonia to USD 101 775 in Luxembourg), instruction time by a ratio of less than 1 to 2 between countries (from 741 hours in Sweden to 1 197 hours in Chile), teaching time varies by a ratio of 1 to 3 between countries (from less than 380 teaching hours in Denmark to 1 087 hours in Chile); and estimated class size varies by a ratio of more than 1 to 3 (from 8.8 students in Portugal to 28.7 in Chile).

Chart B7.2a. Contribution (in USD) of various factors to salary cost of teachers per student, at the upper secondary level of education (2010)



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

Source: OECD, Table B7.4. See Annex 3 for notes (www.oecd.org/edu/eag2012).

StatLink <http://dx.doi.org/10.1787/888932662884>

How to read this chart

This chart shows the contribution (in USD) of the factors to the difference in salary cost of teachers per student between the country and the OECD average. For example, in Spain, the salary cost of teachers per student is USD 2 105 higher than the OECD average. This is because Spain has higher teachers' salaries (+ USD 783) than the OECD average, annual instruction time for students close to the OECD average (+ USD 320) and above-average teaching time for teachers (- USD 150), compared to the OECD average. However, these effects are sharply diminished by significantly smaller class sizes (+ USD 1 153) than the OECD average.

The variety of combinations of the four factors that can result in a given level of salary cost of teachers makes it difficult to find correlations between the level of expenditure and educational outcomes. At the upper secondary level of education, Germany and Spain have similar levels of salary cost of teachers per student – both higher than the average. However, this mainly results from higher-than-average teachers' salaries in Germany, whereas it results from a combination of below-average estimated class size, above-average instruction time and above-average salaries of teachers in Spain (Chart B7.2a and Table B7.4).

However, the level of teachers' salaries and, as a consequence, the level of the salary cost of teachers 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. Comparing the relative salary cost of teachers per student under this analysis provides a different picture. There are still large variations between countries: at the upper secondary level, the relative salary cost of teachers per student represents 9.4% of the GDP per capita, on average among countries with available data in 2010, and varies from 4.2% (Slovak Republic) to 23.3% (Portugal) of the GDP per capita. However, compared to the analysis in USD, the position of a minority of countries changes significantly. This is for example the case for Luxembourg, which has the highest salary cost of teachers per student in USD (mainly as a consequence of the high level of salaries in USD), but not in proportion of the GDP per capita, as salaries as a proportion of GDP in Luxembourg are at the OECD average. As a consequence, salaries of teachers (as a percentage of the GDP per capita) do not increase the salary cost of teachers per student (as a percentage of GDP per capita). In the United States, while the salary cost of teachers per student is above the OECD average, computed in USD, it is below the OECD average as a proportion of GDP per capita (Table B7.4 continued and Chart B7.2b, available on line).

Main drivers of the level of salary cost of teachers per student

Differences in the salary cost of teachers per student between countries may result from different factors. One factor may have a larger impact than the others on the salary cost of teachers per student. Comparing the salary costs of countries to the OECD average rate shows the impact of each of the factors.

Teachers' salaries are most often the main driver of the difference to the average at each level of education in the salary cost of teachers per student. Among countries with available data in 2010, they are the main driver in 18 out of 31 countries at the primary level, 15 out of 30 countries at the lower secondary level, and 17 out of 27 countries at the upper secondary level. This is true both in countries with the highest and lowest levels of salary cost of teachers per student. For example, at the upper secondary level, the above-average salaries of teachers are the main driver of the difference in the country with the highest level of salary cost (Luxembourg), as well as in nine of the ten countries with the lowest levels of salary cost of teachers per student (the Czech Republic, Estonia, Hungary, Iceland, Israel, Poland, the Slovak Republic, Slovenia and Turkey) (Chart B7.2a).

Estimated class size is the second most influential driver of the difference at each level of education. This is the case for 9 countries at the primary level, 13 countries at the lower secondary level, and 5 countries at the upper secondary level. At the upper secondary level, below-average estimated class size is the main driver of the difference with the average salary cost of teachers per student in two out of the four countries with the highest salary cost of teachers per student, Portugal and Spain (Box B7.2).

When differences in countries wealth are accounted for, comparing the relative salary cost of teachers per student offers a similar picture. Salaries of teachers (as a percentage of GDP per capita) and estimated class sizes are the main drivers of the difference to the average in the salary cost of teachers per student, at each level of education. However, each of these two factors is the main driver in approximately the same number of countries. Teachers' salaries (as a percentage of GDP per capita) are the main driver of the difference to the average in 12 out of 31 countries at the primary level, 12 out of 30 countries at the lower secondary level, and 14 out of 27 countries at the upper secondary level. Class size is the main driver in 11 countries at primary level, 14 countries at the lower secondary level and 6 countries at the upper secondary level. Instruction time and teaching time are more often the main drivers of the difference with the OECD average than in the analysis computed in USD.


Box B7.2. Main driver of salary cost of teachers per student, by level of education (2010)

| | Primary education | Lower secondary education | Upper secondary education |
|-----------------------------|---|---|--|
| Salary | 18 countries AUS (+), BFR (+), CAN (+), CHL (-), CZE (-), DNK (+), EST (-), DEU (+), HUN (-), ISL (-), IRL (+), ISR (-), KOR (+), LUX (+), MEX (-), NLD (+), POL (-), SVK (-) | 15 countries CAN (+), CHL (-), CZE (-), DNK (+), EST (-), DEU (+), HUN (-), ISL (-), IRL (+), ISR (-), LUX (+), NLD (+), POL (-), SVK (-), ESP (+) | 17 countries AUT (+), BFL (+), CAN (+), CZE (-), ENG (+), EST (-), DEU (+), HUN (-), ISL (-), IRL (+), ISR (-), LUX (+), NLD (+), POL (-), SVK (-), SVN (-), TUR (-) |
| Instruction time | 2 countries FIN (-), SVN (-) | 0 countries | 2 countries FRA (+), ITA (+) |
| Teaching time | 2 countries FRA (-), USA (-) | 2 countries ITA (+), USA (-) | 3 countries CHL (-), NOR (+), USA (-) |
| Estimated class size | 9 countries AUT (+), BFL (+), ENG (-), ITA (+), JPN (-), NOR (+), PRT (+), ESP (+), TUR (-) | 13 countries AUS (+), AUT (+), BFL (+), BFR (+), ENG (-), FIN (+), FRA (-), JPN (-), KOR (-), MEX (-), NOR (+), PRT (+), SVN (+) | 5 countries AUS (+), FIN (-), KOR (-), PRT (+), ESP (+) |

Note: The positive or negative signs show whether the factor increases or decreases the salary cost of teachers per student.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for the list of country codes used in this table.

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In fact, 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 also in countries that have both low levels of teachers' salaries and GDP per capita compared to other countries (for example, Chile and Turkey). As a result, teachers' salaries as a percentage of GDP per capita are less often the driver of the difference in salary cost of teachers per student with the average (Box B7.2 continued, available on line).

Change in the salary cost of teachers per student between primary and secondary levels

The level of salary cost of teachers per student increases as the level of education increases. This is consistent with increases in teachers' salaries and in the instruction time of students at higher educational levels, but also with the fact that estimated class size and teaching time generally decrease as the level of education increases (Tables B7.1a, B7.1b and B7.1c).

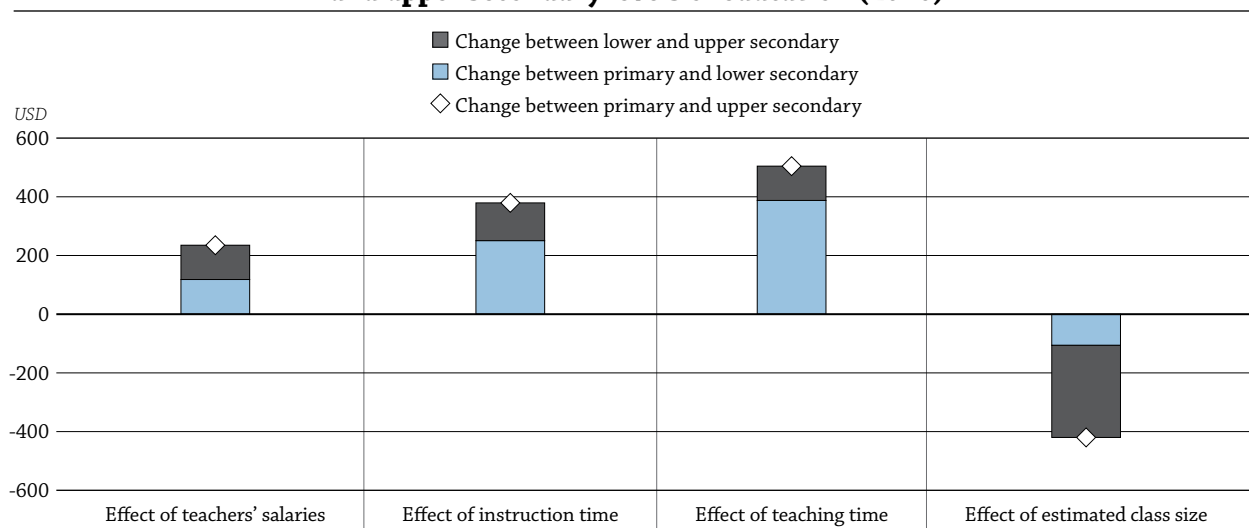
Which factors most influence the increases in the salary cost of teachers per student at successive levels of schooling? The increase is mainly influenced by teaching time, followed by instruction time. Increases in teachers' salaries between the different levels of education play a minor role compared to the other two factors. This may be linked to the fact that the qualifications required to be teachers at the primary and secondary levels of education are similar in some countries and thus, teachers' salaries are similar as well (Chart B7.3 and Table B7.5). In sum, then, education expenditure increases at successive levels of education (from the primary to the secondary level) mainly because teachers spend less time teaching, and pupils have more instruction hours – and to a lesser degree, because teachers have slightly better salaries at higher levels of education. However, as shown in Chart B7.3, increased class sizes at higher schooling levels counterbalances the increase in expenditure.

Change in the salary cost of teachers per student between 2000 and 2010


Changes in the salary cost of teachers per student are only analysed at the primary and lower secondary levels of education because trend data are not available at the upper secondary level, on countries with data on both 2000 and 2010 reference years (17 countries at the primary level and 16 countries at the lower secondary level).

B7

Chart B7.3. Contributions (in USD) of four factors to the average change in salary cost of teachers per student between primary, lower secondary and upper secondary levels of education (2010)



Source: OECD. Table B7.6, available on line. See Annex 3 for notes (www.oecd.org/edu/eag2012).

StatLink  <http://dx.doi.org/10.1787/888932662922>

General pattern of change in salary cost of teachers per student

The salary cost of teachers per student varied largely between 2000 and 2010. At the primary and lower secondary levels of education, the salary cost of teachers per student increased in nearly all countries. It increased by a third and one-quarter, respectively, on average among countries with available data in both years: from USD 1 733 to USD 2 307 at the primary level (among the 17 countries with available data for both years) and from USD 2 273 to USD 2 856 at the lower secondary level (among the 16 countries with available data for both years).

There are two exceptions to this general pattern. In France and Italy, the salary cost of teachers per student decreased at both the primary and lower secondary levels between 2000 and 2010, but the decrease was marginal at the primary level. At the lower secondary level, the decrease of the salary cost of teachers per student in France resulted mainly from a decrease in teachers' salaries (by nearly 8%) during this period, as other factors did not vary by more than 4%. In Italy, the decrease in the salary cost of teachers resulted from an increase in the estimated class size (by 9%), whereas the effect of the increase of teaching time (by 3.6%) was balanced by the effect of the increase of teachers salaries (by 4.6%).

Changes in the four factors explain the overall change in the level of salary cost of teachers per student between 2000 and 2010. At both the primary and lower secondary levels of education, the increase was mostly influenced by the changes in two of the four factors: teachers' salaries and estimated class size. Between 2000 and 2010, among countries with available data in both years, teachers' salaries increased on average by 16% at the primary level and by 14% at lower secondary level, whereas estimated class sizes decreased on average by about 14% at the primary level and by 7% at the lower secondary level. These results are not surprising, because many countries implemented reforms between 2000 and 2010 to decrease class size and/or increase teachers' salaries.

In more than three-quarters of the countries with comparable data for 2000 and 2010, estimated class size tended to become smaller in primary education, most notably in countries that had a relatively large estimated class size in 2000 (for example, the Czech Republic, Ireland, Japan, Korea and Turkey). Similarly, teachers' salaries increased in real terms in most countries over the same period, with the largest increases – well over 50% – seen in the Czech Republic, Estonia and Turkey (Table B7.1a).

There was little or no change with respect to the two other factors (instruction time and teaching time) on average between 2000 and 2010. However, in a small number of countries, instruction time and/or teaching time changed significantly. At the primary level, teaching time increased most significantly in the Czech Republic, with 200 hours of teaching time added between 2000 and 2010 (the salary of teachers also doubled in the Czech Republic during this time). During this period, instruction time increased the most in Iceland (by nearly 200 hours).

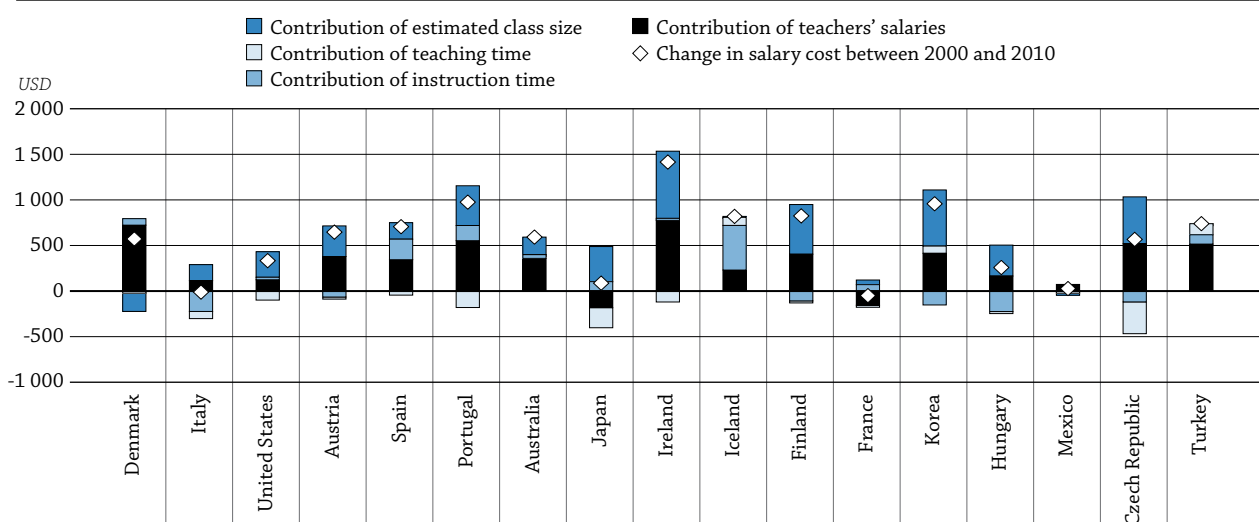
At the lower secondary level, significant changes in teaching and/or instruction time occurred between 2000 and 2010 in three countries. In Greece, instruction time decreased by one-quarter or more (by 268 hours). In Portugal, teaching time increased by more than a quarter (166 hours) and in Spain, both instruction time and teaching time increased by about one-quarter (205 more instruction hours and 149 more teaching hours).

Pattern of change at the primary level

In monetary terms, all of these changes in the features of education systems are reflected in the salary cost of teachers per student. Thus, the majority of countries simultaneously increased teacher's salaries and decreased the estimated class size between 2000 and 2010, which resulted in an increase of the salary cost of teachers per student. On average in countries with available data, the impact of the changes in teachers' salaries on the salary cost of teachers per student is usually larger than the impact of the change in estimated class size (USD 316 and about USD 267, respectively).

However, the impact of each of these two factors on the salary cost varies largely between countries. These two factors combined increased the salary cost by USD 500 or more in Australia, Austria, Denmark, Finland, Hungary, Portugal, Spain and Turkey, by more than USD 1 000 in the Czech Republic and Korea, and by more than USD 1 500 in Ireland. These large increases in the salary cost of teachers per student occurred in countries with either a high salary cost of teachers per student in 2000 (Denmark) or low levels of salary cost of teachers per student in 2000 (the Czech Republic or Korea, for example). Similarly, the decrease in estimated class size had a large impact on the salary cost in both countries with below-average estimated class size in 2000 (Finland) or above-average estimated class size in 2000 (the Czech Republic, Ireland and Korea). Increases in teachers' salaries had also a large impact on the salary cost in countries with below-average salaries in 2000 (in the Czech Republic, Hungary and Turkey, for example) and in countries with above-average salaries in 2000 (Denmark) (Chart B7.4 and Table B7.2).

Chart B7.4. Contribution (in USD) of various factors to the change in salary cost of teachers per student, at primary level of education (2000, 2010)



Countries are ranked in descending order of the salary cost of teachers per student in 2000.

Source: OECD, Table B7.2. See Annex 3 for notes (www.oecd.org/edu/eag2012).

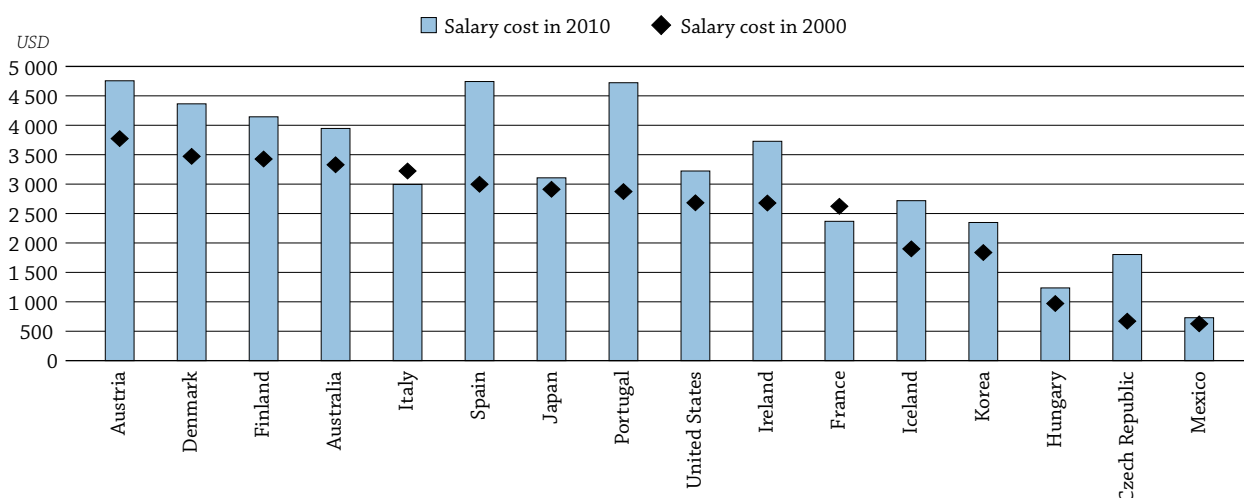
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These changes in teachers' salaries and in estimated class size explain most of the increase in the salary cost of teachers per student. However, changes in teaching and instruction times balanced or significantly complemented (by USD 200 or more) the increase in salary cost. The salary cost of teachers per student also increased by more than USD 200 as a result of a combined decrease in instruction time and an increase of teaching time in Iceland and Turkey. By contrast, the salary cost of teachers per student decreased by more than USD 200 as a result of the combined increase in both instruction time and teaching time in the Czech Republic, Hungary and Italy.

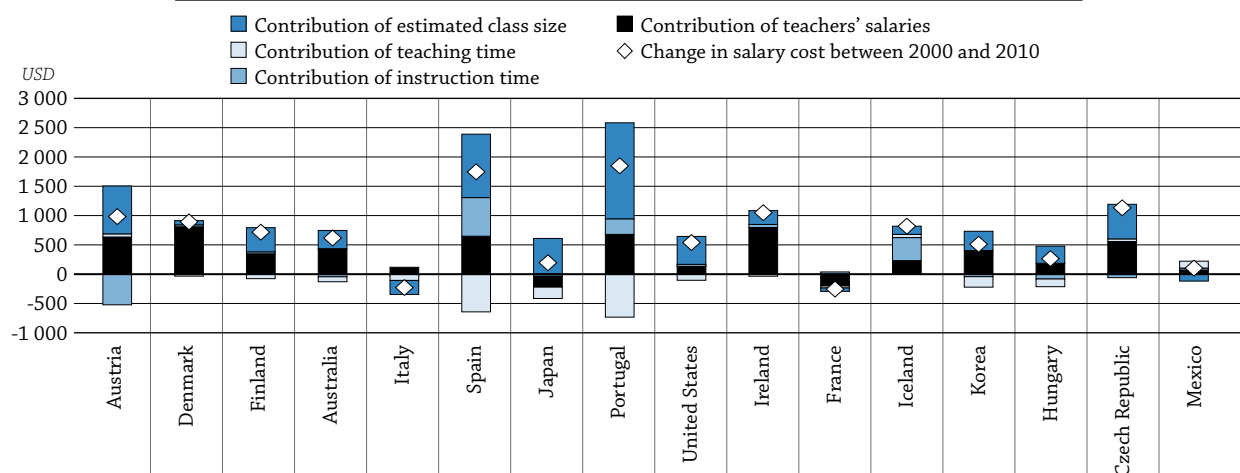
Pattern of change at the lower secondary level

As with the primary level, at the lower secondary level of education, most countries simultaneously increased teachers' salaries and decreased estimated class size between 2000 and 2010. These two changes increased the salary cost by USD 355 and USD 412 per student respectively, on average among countries with available data. Nevertheless, there are large variations between countries in the impact of changes in teachers' salaries and estimated class size, and the extent of the impact of these two factors varies within countries (Table B7.3 and Chart B7.5).

Chart B7.5. Change (in USD) in the salary cost of teachers per student at the lower secondary level of education (2000, 2010)



Contribution (in USD) of various factors to this change



Countries are ranked in descending order of the salary cost of teachers per student in 2000.

Source: OECD, Table B7.3. See Annex 3 for notes (www.oecd.org/edu/eag2012).

StatLink <http://dx.doi.org/10.1787/888932662960>

The combined impact of the increase in teachers' salaries and of the decrease in estimated class size is particularly large in Portugal and Spain (+ USD 2 317 and + USD 1 730 respectively), as teachers' salaries increased by 25% and 16% respectively, and estimated class size decreased by 34% and 28% respectively (from 14.8 to 9.8 students in Portugal, and from 20.6 to 14.9 students in Spain). However, the total change in the salary cost of teachers per student between 2000 and 2010 is a bit smaller in Portugal (+ USD 1 849), as the changes in teaching and instruction times did not completely cancel each other out. In Spain, changes in teaching and instruction times did balance, so that the salary cost of teachers per student increased between 2000 and 2010 by USD 1 746 (USD 16 more than the combined effect of the changes in estimated class size and teachers' salaries). The impact of the increase in teachers' salaries and of the decrease in estimated class size is also large in Austria, the Czech Republic and Ireland, where their combined effects increased the salary cost by more than USD 1 000.

Changes in teaching time and instruction time balanced or complemented the increase in salary cost, but their effect was most significant in Austria, Iceland and Portugal. Mexico is the only country where changes in teaching time increased the salary cost by more than USD 100 per student because the number of teaching hours decreased by more than 100 hours between 2000 and 2010 (from 1 182 hours in 2000 to 1 047 hours in 2010).

As the preceding discussion shows, changes in the four factors certainly impact countries' expenditures on education. At the same time, the choices countries make among these four factors can also affect the outcomes of education. Results from the PISA assessment suggest that at the secondary level, high-performing education systems are generally prioritising the quality of teachers over the size of classes. In the challenging economic climate that countries face today, the efficiency of their choices regarding educational expenditures are likely to be scrutinised more than ever.

Methodology

Reference year: Data referring to the 2010 school year are based on the UOE data collection on education statistics, as well as on the Survey on Teachers and the Curriculum Survey, which were both administered by the OECD in 2011. Data referring to the 2000 school year are based on the UOE data collection on education statistics, and on the Survey on Teachers and the Curriculum Survey, which were both administered by the OECD and published in the 2012 editions (for trend data on teaching time and salary of teachers) and 2002 (ratio of student to teaching staff and instruction time) of *Education at a Glance*. The consistency of 2000 and 2010 data has been validated (for details see Annex 3 at www.oecd.org/edu/eag2012).

Salary cost of teachers 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 the estimated class size (a proxy of the class size; see Box D2.1). In most cases, the values for these variables are derived from *Education at a Glance 2012*, and refer to the school year 2009-10 and 1999-2000. Data for school year 1999-2000 are derived from *Education at a Glance 2002* when they are not available in the current edition. The data for 2000 have been checked to ensure the consistency with 2010 data. Teachers' salaries in national currencies are converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for private consumption, following the methodology used in Indicator D3 on teachers' salaries, which results in the salary cost per student expressed in equivalent USD. Further details on the analysis of these factors are available in Annex 3 at www.oecd.org/edu/eag2012.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.


References

The following additional material relevant to this indicator is available on line at:

- **Box B7.2. (continued) Main driver of salary cost of teacher per student as a percentage of GDP per capita, by level of education (2010)**

StatLink  <http://dx.doi.org/10.1787/888932671776>


- **Chart B7.2b. Contribution (in percentage points of GDP per capita) of various factors to salary cost of teacher per student, at the upper secondary level of education (2010)**

StatLink  <http://dx.doi.org/10.1787/888932662903>


- **Table B7.2a. (continued) Contribution, in percentage points of GDP per capita, of various factors to salary cost of teacher per student at primary level of education (2000, 2010)**

StatLink  <http://dx.doi.org/10.1787/888932666646>

- **Table B7.3. (continued) Contribution, in percentage points of GDP per capita, of various factors to salary cost of teacher per student at lower secondary level of education (2000, 2010)**

StatLink  <http://dx.doi.org/10.1787/888932666684>

- **Table B7.4. (continued) Contribution, in percentage points of GDP per capita, of various factors to salary cost of teacher per student at upper secondary level of education (2010)**

StatLink  <http://dx.doi.org/10.1787/888932666722>

- **Table B7.6. Contribution, in USD, of various factors to salary cost of teacher per student at primary, lower secondary and upper secondary levels of education (2010)**


StatLink  <http://dx.doi.org/10.1787/888932666760>

Table B7.1a. Factors used to compute the salary cost of teachers per student, at the primary level of education (2000, 2010)

| | Teachers' salary (annual, in USD, 2010 constant prices) | | | Instruction time (for students, hours per year) | | | Teaching time (for teachers, hours per year) | | | Ratio of students to teaching staff (number of students per teacher) | | | Estimated class size (number of students per classroom) | | |
|---|---|---------------|----------------------------|---|------------|----------------------------|--|------------|----------------------------|---|-------------|----------------------------|--|-------------------------|----------------------------|
| | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) = (10) x (4) / (7) | (14) = (11) x (5) / (8) | (15) |
| OECD | | | | | | | | | | | | | | | |
| Australia ¹ | 47 445 | 41 925 | 13.2 | 984 | 987 | -0.3 | 868 | 882 | -1.6 | 15.7 | 17.3 | -9.1 | 17.8 | 19.3 | -7.8 |
| Austria ¹ | 40 818 | 35 479 | 15.0 | 811 | 833 | -2.6 | 779 | 779 | 0.0 | 12.2 | 13.2 | -7.3 | 12.7 | 14.1 | -9.7 |
| Belgium (Fl.) | 44 076 | 39 784 | 10.8 | 835 | m | m | 761 | 767 | -0.8 | 12.4 | m | m | 13.6 | m | m |
| Belgium (Fr.) | 42 792 | 38 518 | 11.1 | 930 | 930 | 0.0 | 732 | 804 | -9.0 | 12.4 | m | m | 15.7 | m | m |
| Canada | 54 978 | m | m | 921 | m | m | 799 | m | m | 17.9 | 18.1 | -1.1 | 20.7 | m | m |
| Chile | 23 411 | m | m | 1 083 | 1 060 | 2.2 | 1 087 | m | m | 24.6 | m | m | 24.6 | m | m |
| Czech Republic ^{1, 2} | 19 949 | 9 859 | 102.3 | 706 | 752 | -6.2 | 862 | 650 | 32.7 | 18.7 | 19.7 | -5.2 | 15.3 | 22.8 | -32.9 |
| Denmark ¹ | 50 253 | 39 486 | 27.3 | 813 | 790 | 2.8 | 650 | 640 | 1.6 | 11.5 | 10.4 | 10.6 | 14.4 | 12.9 | 12.0 |
| England | 44 145 | 40 510 | 9.0 | 899 | 890 | 1.0 | 684 | m | m | 19.8 | 21.2 | -6.6 | 26.1 | m | m |
| Estonia | 12 576 | 7 530 | 67.0 | 683 | m | m | 630 | 630 | 0.0 | 16.2 | m | m | 17.5 | m | m |
| Finland ¹ | 37 455 | 31 095 | 20.5 | 683 | 694 | -1.5 | 680 | 656 | 3.8 | 14.0 | 16.9 | -16.8 | 14.1 | 17.8 | -21.0 |
| France ¹ | 32 733 | 35 692 | -8.3 | 847 | 814 | 4.1 | 918 | 907 | 1.2 | 18.7 | 19.8 | -5.7 | 17.3 | 17.8 | -3.0 |
| Germany | 55 771 | m | m | 793 | 796 | -0.4 | 805 | 783 | 2.8 | 16.7 | 19.8 | -15.7 | 16.5 | 20.1 | -18.3 |
| Greece | 32 387 | 27 825 | 16.4 | 812 | 928 | -12.5 | 589 | 609 | -3.2 | m | 13.4 | m | m | 20.4 | m |
| Hungary ¹ | 13 228 | 10 609 | 24.7 | 724 | 834 | -13.2 | 604 | 583 | 3.6 | 10.8 | 10.9 | -1.6 | 12.9 | 15.7 | -17.6 |
| Iceland ¹ | 27 930 | 24 112 | 15.8 | 889 | 692 | 28.4 | 624 | 629 | -0.8 | 10.3 | 12.7 | -19.1 | 14.6 | 14.0 | 4.7 |
| Ireland ¹ | 53 677 | 42 010 | 27.8 | 915 | 941 | -2.7 | 915 | 915 | 0.0 | 15.9 | 21.5 | -25.9 | 15.9 | 22.1 | -27.9 |
| Israel | 25 181 | 19 193 | 31.2 | 990 | m | m | 820 | 731 | 12.1 | 20.6 | m | m | 24.8 | m | m |
| Italy ¹ | 32 658 | 31 050 | 5.2 | 924 | 1 020 | -9.4 | 770 | 744 | 3.5 | 11.3 | 10.7 | 5.6 | 13.6 | 14.7 | -7.6 |
| Japan ¹ | 44 788 | 49 033 | -8.7 | 800 | 761 | 5.1 | 707 | 635 | 11.3 | 18.4 | 20.9 | -11.9 | 20.8 | 25.0 | -16.8 |
| Korea ¹ | 46 338 | 39 720 | 16.7 | 703 | 737 | -4.6 | 807 | 865 | -6.7 | 21.1 | 32.1 | -34.3 | 18.4 | 27.4 | -32.8 |
| Luxembourg | 95 043 | m | m | 924 | m | m | 739 | m | m | 10.1 | 15.9 | -36.6 | 12.6 | m | m |
| Mexico ¹ | 18 621 | 17 201 | 8.3 | 800 | 800 | 0.0 | 800 | 800 | 0.0 | 28.1 | 27.2 | 3.6 | 28.1 | 27.2 | 3.6 |
| Netherlands | 50 621 | m | 22.8 | 940 | 1 000 | -6.0 | 930 | 930 | 0.0 | 15.7 | 16.8 | -6.3 | 15.9 | 18.1 | -11.9 |
| New Zealand | 41 009 | 38 066 | 7.7 | m | 985 | m | 930 | 985 | -5.6 | 16.2 | 20.6 | -21.4 | m | 20.6 | m |
| Norway | 35 991 | m | m | 773 | 703 | 9.9 | 741 | 713 | 4.0 | 10.5 | 12.4 | -15.7 | 10.9 | 12.2 | -10.9 |
| Poland | 15 186 | m | m | 763 | m | m | 502 | m | m | 10.0 | 12.7 | -21.4 | 15.1 | m | m |
| Portugal ¹ | 37 542 | 29 981 | 25.2 | 888 | 833 | 6.6 | 865 | 815 | 6.1 | 10.9 | 12.1 | -10.2 | 11.2 | 12.4 | -9.9 |
| Scotland | 48 188 | 39 724 | 21.3 | a | 950 | m | 855 | 950 | -10.0 | 19.8 | 21.2 | -6.6 | m | 21.2 | m |
| Slovak Republic | 12 688 | m | m | 794 | m | m | 841 | m | m | 17.1 | 18.3 | -6.9 | 16.1 | m | m |
| Slovenia | 32 436 | m | m | 721 | m | m | 690 | m | m | 16.2 | m | m | 17.0 | m | m |
| Spain ¹ | 42 846 | 38 080 | 12.5 | 875 | 795 | 10.1 | 880 | 880 | 0.0 | 13.2 | 14.9 | -11.9 | 13.1 | 13.5 | -3.0 |
| Sweden | 33 374 | 30 898 | 8.0 | 741 | 741 | 0.0 | a | a | m | 11.7 | 12.8 | -8.7 | m | m | m |
| Switzerland | m | m | m | m | m | m | m | 884 | m | 14.9 | m | m | m | m | m |
| Turkey ¹ | 24 761 | 12 276 | 101.7 | 864 | 796 | 8.5 | 621 | 639 | -2.8 | 21.7 | 30.5 | -29.0 | 30.1 | 38.0 | -20.7 |
| United States ¹ | 45 226 | 43 867 | 3.1 | 980 | 980 | 0.0 | 1 097 | 1 080 | 1.6 | 14.5 | 15.8 | -8.0 | 13.0 | 14.3 | -9.4 |
| OECD average | 37 603 | 31 289 | 22.5 | 843 | 853 | 0.8 | 782 | 782 | 1.6 | 15.7 | 17.6 | -11.5 | 17.1 | 19.2 | -12.1 |
| Average for 17 countries with all data available | 36 251 | 31 263 | 16.0 | 836 | 827 | 1.1 | 791 | 771 | 2.7 | 15.7 | 18.0 | -12.9 | 16.6 | 19.4 | -14.3 |

Note: Data in this table come either from Chapter D (for 2010 data and 2000 data relating to salaries of teachers and teaching time) or from *Education at a Glance 2002* (for 2000 data on ratio of student to teaching staff and instruction time). Some 2000 data have been revised to ensure consistency with 2010 data.

1. Countries with all data available for both 2000 and 2010.

2. Current instruction time for 2000, minimum instruction time for 2010.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


StatLink  <http://dx.doi.org/10.1787/888932666570>

Table B7.1b. **Factors used to compute the salary cost of teachers per student, at the lower secondary level of education (2000, 2010)**

| | Teachers' salary (annual, in USD, 2010 constant prices) | | | Instruction time (for students, hours per year) | | | Teaching time (for teachers, hours per year) | | | Ratio of students to teaching staff (number of students per teacher) | | | Estimated class size (number of students per classroom) | | |
|---|---|---------------|----------------------------|---|------------|----------------------------|--|------------|----------------------------|---|-----------|----------------------------|--|-------------------------|----------------------------|
| | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) | 2010 | 2000 | Variation 2000-2010 (%) |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) = (10) x (4) / (7) | (14) = (11) x (5) / (8) | (15) |
| OECD | | | | | | | | | | | | | | | |
| Australia ¹ | 47 445 | 41 942 | 13.1 | 997 | 1 019 | -2.2 | 819 | 811 | 1.1 | 12.0 | 12.6 | -4.6 | 14.6 | 15.8 | -7.7 |
| Austria ¹ | 44 179 | 36 976 | 19.5 | 959 | 1 148 | -16.5 | 607 | 607 | 0.0 | 9.3 | 9.8 | -5.2 | 14.7 | 18.5 | -20.9 |
| Belgium (Fl.) | 44 076 | 41 952 | 5.1 | 960 | m | m | 675 | 682 | -1.0 | 8.1 | m | m | 11.5 | m | m |
| Belgium (Fr.) | 42 792 | 40 999 | 4.4 | 1 020 | 1 075 | -5.1 | 671 | 728 | -7.8 | 8.1 | m | m | 12.3 | m | m |
| Canada | 54 978 | m | m | 922 | m | m | 740 | m | m | 17.9 | 18.1 | -1.1 | 22.3 | m | m |
| Chile | 23 411 | m | m | 1 083 | 1 080 | 0.3 | 1 087 | m | m | 25.1 | m | m | 25.0 | m | m |
| Czech Republic ^{1, 2} | 20 217 | 9 859 | 105.1 | 862 | 867 | -0.5 | 647 | 650 | -0.5 | 11.2 | 14.7 | -23.7 | 14.9 | 19.6 | -23.7 |
| Denmark ¹ | 50 253 | 39 486 | 27.3 | 900 | 890 | 1.1 | 650 | 640 | 1.6 | 11.5 | 11.4 | 1.2 | 15.9 | 15.8 | 0.8 |
| England | 44 145 | 40 510 | 9.0 | 925 | 940 | -1.6 | 703 | m | m | 17.1 | 17.6 | -2.7 | 22.5 | m | m |
| Estonia | 12 576 | 7 530 | 67.0 | 802 | m | m | 630 | 630 | 0.0 | 14.9 | m | m | 19.0 | m | m |
| Finland ¹ | 40 451 | 36 501 | 10.8 | 829 | 808 | 2.6 | 595 | 570 | 4.4 | 9.8 | 10.7 | -8.4 | 13.6 | 15.1 | -9.9 |
| France ¹ | 35 583 | 38 528 | -7.6 | 1 065 | 1 042 | 2.2 | 646 | 639 | 1.1 | 15.0 | 14.7 | 2.3 | 24.8 | 24.0 | 3.4 |
| Germany | 61 784 | m | m | 887 | 903 | -1.8 | 756 | 732 | 3.2 | 14.9 | 15.7 | -5.2 | 17.4 | 19.3 | -9.8 |
| Greece | 32 387 | 27 825 | 16.4 | 796 | 1 064 | -25.2 | 415 | 426 | -2.6 | m | 10.8 | m | m | 26.9 | m |
| Hungary ¹ | 13 228 | 10 609 | 24.7 | 885 | 925 | -4.3 | 604 | 555 | 8.8 | 10.7 | 10.9 | -2.1 | 15.7 | 18.2 | -13.8 |
| Iceland ¹ | 27 930 | 24 112 | 15.8 | 969 | 809 | 19.8 | 624 | 629 | -0.8 | 10.3 | 12.7 | -19.1 | 16.0 | 16.3 | -2.3 |
| Ireland ¹ | 53 677 | 42 462 | 26.4 | 929 | 907 | 2.3 | 735 | 735 | 0.0 | 14.4 | 15.9 | -9.2 | 18.2 | 19.6 | -7.1 |
| Israel | 23 047 | 21 333 | 8.0 | 981 | m | m | 598 | 579 | 3.3 | 12.8 | m | m | 20.9 | m | m |
| Italy ¹ | 35 583 | 34 010 | 4.6 | 1 023 | 1 020 | 0.3 | 630 | 608 | 3.6 | 11.9 | 10.6 | 12.6 | 19.3 | 17.7 | 9.0 |
| Japan ¹ | 44 788 | 49 033 | -8.7 | 877 | 875 | 0.2 | 602 | 557 | 8.0 | 14.4 | 16.8 | -14.4 | 21.0 | 26.5 | -20.6 |
| Korea ¹ | 46 232 | 39 577 | 16.8 | 859 | 867 | -1.0 | 627 | 570 | 10.0 | 19.7 | 21.5 | -8.6 | 27.0 | 32.8 | -17.7 |
| Luxembourg | 101 775 | m | m | 908 | m | m | 634 | m | m | 9.1 | m | m | 13.1 | m | m |
| Mexico ¹ | 23 854 | 21 768 | 9.6 | 1 167 | 1 167 | 0.0 | 1 047 | 1 182 | -11.4 | 32.7 | 34.8 | -6.0 | 36.5 | 34.3 | 6.2 |
| Netherlands | 61 704 | m | 39.8 | 1 000 | 1 067 | -6.3 | 750 | 867 | -13.5 | 16.5 | 17.1 | -3.5 | 22.0 | 21.0 | 4.6 |
| New Zealand | 42 062 | 38 066 | 10.5 | m | 948 | m | 845 | 968 | -12.7 | 16.3 | 19.9 | -18.1 | m | 19.5 | m |
| Norway | 35 991 | m | m | 836 | 827 | 1.1 | 654 | 633 | 3.2 | 9.9 | 9.9 | 0.2 | 12.7 | 12.9 | -1.9 |
| Poland | 17 300 | m | m | 820 | m | m | 497 | m | m | 12.7 | 11.5 | 10.7 | 20.9 | m | m |
| Portugal ¹ | 37 542 | 29 981 | 25.2 | 934 | 842 | 10.9 | 761 | 595 | 27.9 | 7.9 | 10.4 | -23.8 | 9.8 | 14.8 | -33.9 |
| Scotland | 48 188 | 39 724 | 21.3 | a | a | m | 855 | 893 | -4.3 | 17.1 | 17.6 | -2.7 | m | m | m |
| Slovak Republic | 12 688 | m | m | 851 | m | m | 652 | m | m | 13.6 | 13.5 | 0.4 | 17.7 | m | m |
| Slovenia | 32 436 | m | m | 817 | m | m | 690 | m | m | 8.0 | m | m | 9.5 | m | m |
| Spain ¹ | 47 816 | 41 144 | 16.2 | 1 050 | 845 | 24.3 | 713 | 564 | 26.3 | 10.1 | 13.7 | -26.6 | 14.9 | 20.6 | -27.8 |
| Sweden | 34 481 | 30 898 | 11.6 | 741 | 741 | 0.0 | a | a | a | 11.4 | 12.8 | -11.2 | m | m | m |
| Switzerland | m | m | m | m | m | m | m | 859 | m | 11.8 | m | m | m | m | m |
| Turkey | a | m | m | 864 | 796 | 8.5 | a | a | a | a | a | a | m | m | m |
| United States ¹ | 45 049 | 43 697 | 3.1 | 980 | 980 | 0.0 | 1 068 | 1 080 | -1.1 | 14.0 | 16.3 | -14.2 | 12.8 | 14.8 | -13.2 |
| OECD average | 39 401 | 33 141 | 18.2 | 924 | 940 | 0.4 | 704 | 703 | 1.8 | 14 | 15 | -7.0 | 17.9 | 20 | -9.8 |
| Average for 16 countries with all data available | 38 364 | 33 730 | 13.7 | 955 | 938 | 1.8 | 711 | 687 | 3.5 | 13 | 15 | -9.5 | 18.0 | 19.4 | -6.8 |

Note: Data in this table come either from Chapter D (for 2010 data and 2000 data relating to salaries of teachers and teaching time) or from *Education at a Glance 2002* (for 2000 data on ratio of student to teaching staff and instruction time). Some 2000 data have been revised to ensure consistency with 2010 data.

1. Countries with all data available for both 2000 and 2010.

2. Current instruction time for 2000, minimum instruction time for 2010.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


StatLink  <http://dx.doi.org/10.1787/88893266589>

Table B7.1c. **Factors used to compute the salary cost of teachers per student, at upper secondary level of education (2010)**

| | Teachers' salary (annual, in USD) | Instruction time (for students, hours per year) | Teaching time (for teachers, hours per year) | Ratio of students to teaching staff (number of students per teacher) | Estimated class size (number of students per classroom) |
|---|--------------------------------------|---|--|---|---|
| | (1) | (2) | (3) | (4) | (5) = (4) x (2) / (3) |
| OECD | | | | | |
| Australia ¹ | 47 445 | 982 | 803 | 12.0 | 14.7 |
| Austria ¹ | 45 425 | 1 050 | 589 | 10.1 | 18.1 |
| Belgium (Fl.) ¹ | 56 638 | 960 | 630 | 10.1 | 15.4 |
| Belgium (Fr.) | 55 157 | m | 610 | 10.1 | m |
| Canada ¹ | 55 191 | 919 | 744 | 15.9 | 19.6 |
| Chile ¹ | 24 820 | 1 197 | 1 087 | 26.1 | 28.7 |
| Czech Republic ¹ | 21 449 | 794 | 617 | 12.1 | 15.5 |
| Denmark | 58 256 | 930 | 377 | m | m |
| England ¹ | 44 145 | 950 | 703 | 15.2 | 20.6 |
| Estonia | 12 576 | 840 | 578 | 16.6 | 24.1 |
| Finland ¹ | 42 809 | 913 | 553 | 17.1 | 28.2 |
| France ¹ | 35 819 | 1 147 | 632 | 9.7 | 17.6 |
| Germany ¹ | 66 895 | 933 | 713 | 13.2 | 17.3 |
| Greece | 32 387 | 773 | 415 | m | m |
| Hungary ¹ | 15 616 | 1 106 | 604 | 12.5 | 22.8 |
| Iceland ¹ | 28 103 | 987 | 544 | 11.3 | 20.6 |
| Ireland ¹ | 53 677 | 935 | 735 | 14.4 | 18.3 |
| Israel ¹ | 21 009 | 1 101 | 521 | 11.0 | 23.3 |
| Italy ¹ | 36 582 | 1 089 | 630 | 12.1 | 20.9 |
| Japan | 44 788 | m | 500 | 12.2 | m |
| Korea ¹ | 46 232 | 1 020 | 616 | 16.5 | 27.4 |
| Luxembourg ¹ | 101 775 | 900 | 634 | 9.1 | 13.0 |
| Mexico | m | 799 | 843 | 26.9 | 25.5 |
| Netherlands ¹ | 61 704 | 1 000 | 750 | 16.5 | 22.0 |
| New Zealand | 43 116 | m | 760 | 14.4 | m |
| Norway ¹ | 38 817 | 858 | 523 | 9.4 | 15.5 |
| Poland ¹ | 19 791 | 865 | 494 | 12.1 | 21.1 |
| Portugal ¹ | 37 542 | 934 | 761 | 7.2 | 8.8 |
| Scotland | 48 188 | a | 855 | 15.2 | m |
| Slovak Republic ¹ | 12 698 | 936 | 624 | 14.6 | 21.9 |
| Slovenia ¹ | 32 436 | 908 | 633 | 14.3 | 20.5 |
| Spain ¹ | 48 818 | 1 050 | 693 | 9.6 | 14.5 |
| Sweden | 36 429 | 741 | a | 13.1 | m |
| Switzerland | m | m | m | 10.3 | m |
| Turkey ¹ | 25 411 | 810 | 551 | 17.6 | 25.8 |
| United States ¹ | 48 446 | 980 | 1 051 | 15.0 | 14.0 |
| OECD average | 41 182 | 949 | 658 | 13.6 | 19.9 |
| Average for 26 countries with all data available | 40 069 | 969 | 667 | 13.4 | 19.4 |

Note: Data in this table come from Chapter D.

1. Countries with all data available for 2010.

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


StatLink  <http://dx.doi.org/10.1787/888932666608>

Table B7.2. **Contribution, in USD, of various factors to salary cost of teachers per student at the primary level of education (2000, 2010)***In equivalent USD, converted using PPPs for private consumption*

| | Salary cost of teacher per student | | Difference (in USD) from the 2000 OECD average of USD 1 733 | | | Contribution of the underlying factors to the difference from the OECD average | | | | | | | | | | | |
|--|------------------------------------|--------------|---|------------|---------------------|---|--------|---------------------|---|-------|---------------------|--|-------|---------------------|--|-------|---------------------|
| | | | | | | Effect (in USD) of teachers' salary below/above the 2000 OECD average of USD 31 263 | | | Effect (in USD) of instruction time (for students) below/above the 2000 OECD average of 827 hours | | | Effect (in USD) of teaching time (for teachers) below/above the 2000 OECD average of 771 hours | | | Effect (in USD) of estimated class size below/above the 2000 OECD average of 19.4 students per class | | |
| | 2010 | 2000 | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
| OECD | | | | | | | | | | | | | | | | | |
| Australia | 3 015 | 2 423 | 1 283 | 690 | 593 | 965 | 606 | 359 | 407 | 366 | 41 | - 283 | - 283 | 0 | 194 | 1 | 192 |
| Austria | 3 335 | 2 688 | 1 602 | 955 | 647 | 657 | 277 | 380 | - 49 | 16 | - 65 | - 29 | - 25 | - 3 | 1 023 | 687 | 336 |
| Belgium (Fl.) | 3 556 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Belgium (Fr.) | 3 452 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Canada | 3 067 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Chile | 950 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Czech Republic | 1 068 | 500 | - 665 | -1 232 | 567 | - 621 | -1 142 | 521 | - 222 | - 104 | - 118 | - 158 | 191 | - 349 | 336 | - 178 | 514 |
| Denmark | 4 364 | 3 791 | 2 631 | 2 059 | 573 | 1 341 | 618 | 724 | - 51 | - 123 | 71 | 492 | 493 | - 1 | 849 | 1 071 | - 222 |
| England | 2 226 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Estonia | 776 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Finland | 2 670 | 1 844 | 937 | 112 | 825 | 395 | - 10 | 405 | - 423 | - 316 | - 107 | 273 | 290 | - 18 | 692 | 147 | 545 |
| France | 1 751 | 1 800 | 19 | 68 | - 49 | 80 | 235 | - 155 | 43 | - 29 | 71 | - 306 | - 289 | - 16 | 202 | 151 | 51 |
| Germany | 3 338 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Greece | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Hungary | 1 228 | 969 | - 505 | - 764 | 259 | -1 335 | -1 500 | 166 | - 212 | 12 | - 224 | 390 | 412 | - 22 | 652 | 312 | 339 |
| Iceland | 2 718 | 1 899 | 986 | 166 | 820 | - 251 | - 482 | 231 | 160 | - 330 | 489 | 464 | 375 | 89 | 613 | 602 | 11 |
| Ireland | 3 373 | 1 956 | 1 640 | 224 | 1 416 | 1 332 | 550 | 783 | 256 | 240 | 16 | - 440 | - 321 | - 119 | 492 | - 245 | 737 |
| Israel | 1 224 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Italy | 2 881 | 2 891 | 1 148 | 1 159 | - 11 | 100 | - 16 | 115 | 252 | 475 | - 223 | 2 | 80 | - 78 | 794 | 619 | 176 |
| Japan | 2 437 | 2 350 | 704 | 617 | 88 | 744 | 925 | - 181 | - 68 | - 172 | 104 | 180 | 400 | - 220 | - 151 | - 536 | 385 |
| Korea | 2 194 | 1 236 | 461 | - 497 | 958 | 775 | 360 | 415 | - 324 | - 172 | - 152 | - 93 | - 172 | 80 | 103 | - 512 | 616 |
| Luxembourg | 9 404 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Mexico | 662 | 633 | -1 071 | -1 099 | 28 | - 572 | - 646 | 74 | - 38 | - 37 | - 1 | - 43 | - 42 | - 1 | - 418 | - 374 | - 44 |
| Netherlands | 3 215 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| New Zealand | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Norway | 3 442 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Poland | 1 524 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Portugal | 3 447 | 2 471 | 1 715 | 738 | 976 | 465 | - 89 | 553 | 182 | 16 | 167 | - 299 | - 119 | - 180 | 1 366 | 930 | 436 |
| Scotland | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Slovak Republic | 744 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Slovenia | 1 998 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Spain | 3 257 | 2 549 | 1 524 | 817 | 707 | 766 | 421 | 345 | 139 | - 86 | 225 | - 330 | - 287 | - 44 | 949 | 768 | 181 |
| Sweden | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Switzerland | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Turkey | 1 142 | 402 | - 590 | -1 331 | 740 | - 336 | - 852 | 516 | 64 | - 38 | 102 | 315 | 194 | 122 | - 633 | - 634 | 0 |
| United States | 3 110 | 2 776 | 1 378 | 1 043 | 334 | 887 | 762 | 125 | 412 | 385 | 27 | - 878 | - 779 | - 98 | 957 | 676 | 280 |
| Average for countries with available data in both 2000 and 2010 | 2 307 | 1 733 | 776 | 219 | 557 | | | 316 | | | 25 | | | - 51 | | | 267 |

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


StatLink  <http://dx.doi.org/10.1787/888932666627>

Table B7.3. **Contribution, in USD, of various factors to salary cost of teachers per student at the lower secondary level of education (2000, 2010)***In equivalent USD, converted using PPPs for private consumption*

| | | Salary cost of teacher per student | | Difference (in USD) from the 2000 OECD average of USD 2 273 | | | Contribution of the underlying factors to the difference from the OECD average | | | | | | | | | | | |
|---|-----------------|------------------------------------|-------|---|---------|-------|---|---------|---------------------|---|-------|---------------------|--|-------|---------------------|--|-------|---------------------|
| | | | | | | | Effect (in USD) of teachers' salary below/above the 2000 OECD average of USD 33 730 | | | Effect (in USD) of instruction time (for students) below/above the 2000 OECD average of 938 hours | | | Effect (in USD) of teaching time (for teachers) below/above the 2000 OECD average of 687 hours | | | Effect (in USD) of estimated class size below/above the 2000 OECD average of 20.3 students per class | | |
| | | | | | | | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 | 2010 | 2000 | variation 2000-2010 |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
| OECD | Australia | 3 946 | 3 329 | 1 673 | 1 056 | 617 | 1 041 | 606 | 435 | 187 | 232 | - 45 | - 550 | - 466 | - 84 | 995 | 684 | 311 |
| | Austria | 4 756 | 3 773 | 2 483 | 1 500 | 983 | 907 | 273 | 634 | 73 | 596 | - 523 | 422 | 368 | 53 | 1 081 | 264 | 818 |
| | Belgium (Fl.) | 5 440 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Belgium (Fr.) | 5 281 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Canada | 3 067 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Chile | 933 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Czech Republic | 1 803 | 671 | - 469 | - 1 602 | 1 133 | - 1 060 | - 1 618 | 557 | - 176 | - 116 | - 59 | 126 | 82 | 44 | 641 | 50 | 590 |
| | Denmark | 4 364 | 3 471 | 2 091 | 1 199 | 893 | 1 274 | 447 | 827 | - 136 | - 151 | 15 | 180 | 201 | - 21 | 773 | 701 | 73 |
| | England | 2 577 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Estonia | 844 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Finland | 4 143 | 3 426 | 1 871 | 1 154 | 717 | 572 | 224 | 348 | - 396 | - 429 | 33 | 451 | 528 | - 77 | 1 244 | 831 | 413 |
| | France | 2 368 | 2 623 | 95 | 350 | - 255 | 125 | 326 | - 201 | 296 | 258 | 38 | 143 | 178 | - 34 | - 469 | - 411 | - 58 |
| | Germany | 4 154 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Greece | m | 2 579 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Hungary | 1 236 | 971 | - 1 037 | - 1 302 | 265 | - 1 646 | - 1 831 | 186 | - 106 | - 24 | - 82 | 239 | 370 | - 131 | 477 | 184 | 293 |
| | Iceland | 2 718 | 1 899 | 446 | - 373 | 819 | - 475 | - 706 | 231 | 81 | - 313 | 394 | 241 | 187 | 55 | 599 | 459 | 140 |
| | Ireland | 3 728 | 2 678 | 1 455 | 406 | 1 049 | 1 366 | 570 | 797 | - 31 | - 83 | 52 | - 202 | - 167 | - 35 | 322 | 86 | 236 |
| | Israel | 1 807 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Italy | 2 994 | 3 222 | 722 | 950 | - 228 | 140 | 23 | 117 | 226 | 228 | - 1 | 226 | 332 | - 106 | 129 | 368 | - 239 |
| | Japan | 3 107 | 2 911 | 834 | 639 | 195 | 757 | 978 | - 221 | - 182 | - 184 | 2 | 356 | 550 | - 194 | - 98 | - 706 | 608 |
| | Korea | 2 348 | 1 837 | 75 | - 435 | 510 | 740 | 336 | 403 | - 208 | - 165 | - 43 | 214 | 393 | - 178 | - 671 | - 999 | 329 |
| | Luxembourg | 11 145 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Mexico | 729 | 626 | - 1 543 | - 1 647 | 104 | - 482 | - 571 | 89 | 319 | 304 | 16 | - 582 | - 699 | 118 | - 799 | - 680 | - 118 |
| | Netherlands | 3 740 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | New Zealand | m | 1 914 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Norway | 3 630 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Poland | 1 364 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Portugal | 4 723 | 2 873 | 2 450 | 601 | 1 849 | 373 | - 306 | 679 | - 15 | - 280 | 266 | - 362 | 372 | - 734 | 2 454 | 816 | 1 638 |
| | Scotland | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Slovak Republic | 933 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Slovenia | 4 060 | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| | Spain | 4 743 | 2 997 | 2 470 | 724 | 1 746 | 1 169 | 522 | 648 | 383 | - 276 | 659 | - 127 | 516 | - 643 | 1 045 | - 37 | 1 082 |
| | Sweden | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m |
| Switzerland | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | |
| Turkey | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | |
| United States | 3 223 | 2 683 | 950 | 410 | 540 | 813 | 658 | 155 | 123 | 111 | 12 | - 1 265 | - 1 161 | - 104 | 1 278 | 802 | 477 | |
| Average for countries with available data in both 2000 and 2010 | | 2 856 | 2 273 | 910 | 227 | 684 | | 355 | | | 46 | | | - 129 | | | 412 | |

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


StatLink  <http://dx.doi.org/10.1787/888932666665>

Table B7.4. Contribution, in USD, of various factors to salary cost of teachers per student at the upper secondary level of education (2010)

In equivalent USD, converted using PPPs for private consumption

| | Salary cost of teacher per student | Difference (in USD) from the 2000 OECD average of USD 29 94 | Contribution of the underlying factors to the difference from the OECD average | | | |
|-----------------|------------------------------------|---|---|---|--|--|
| | | | Effect (in USD) of teachers' salary below/above the 2000 OECD average of USD 40 069 | Effect (in USD) of instruction time (for students) below/above the 2000 OECD average of 969 hours | Effect (in USD) of teaching time (for teachers) below/above the 2000 OECD average of 667 hours | Effect (in USD) of estimated class size below/above the 2000 OECD average of 19.4 students per class |
| | (1) | (2) = (3)+(4)+(5)+(6) | (3) | (4) | (5) | (6) |
| OECD | | | | | | |
| Australia | 3 946 | 952 | 587 | 46 | -651 | 969 |
| Austria | 4 480 | 1 486 | 462 | 296 | 461 | 266 |
| Belgium (Fl.) | 5 588 | 2 594 | 1 434 | -40 | 241 | 959 |
| Belgium (Fr.) | m | m | m | m | m | m |
| Canada | 3 475 | 481 | 1 040 | -172 | -357 | -30 |
| Chile | 951 | -2 043 | -862 | 405 | -877 | -709 |
| Czech Republic | 1 775 | -1 219 | -1 477 | -480 | 189 | 549 |
| Denmark | m | m | m | m | m | m |
| England | 2 901 | -94 | 286 | -59 | -155 | -166 |
| Estonia | 758 | -2 236 | -1 862 | -256 | 266 | -384 |
| Finland | 2 509 | -485 | 184 | -165 | 524 | -1 029 |
| France | 3 705 | 711 | -377 | 565 | 182 | 341 |
| Germany | 5 052 | 2 058 | 2 018 | -153 | -270 | 462 |
| Greece | m | m | m | m | m | m |
| Hungary | 1 252 | -1 742 | -1 902 | 288 | 216 | -344 |
| Iceland | 2 477 | -518 | -976 | 50 | 566 | -158 |
| Ireland | 3 728 | 733 | 982 | -120 | -327 | 198 |
| Israel | 1 903 | -1 091 | -1 585 | 323 | 626 | -455 |
| Italy | 3 029 | 34 | -275 | 352 | 173 | -216 |
| Japan | m | m | m | m | m | m |
| Korea | 2 798 | -196 | 420 | 150 | 234 | -1 000 |
| Luxembourg | 11 145 | 8 150 | 5 696 | -501 | 345 | 2 610 |
| Mexico | m | m | m | m | m | m |
| Netherlands | 3 740 | 745 | 1 462 | 107 | -401 | -423 |
| New Zealand | m | m | m | m | m | m |
| Norway | 4 115 | 1 121 | -113 | -435 | 865 | 804 |
| Poland | 1 642 | -1 352 | -1 612 | -268 | 720 | -193 |
| Portugal | 5 246 | 2 252 | -277 | -155 | -562 | 3 246 |
| Scotland | m | m | m | m | m | m |
| Slovak Republic | 870 | -2 124 | -1 963 | -67 | 129 | -224 |
| Slovenia | 2 267 | -727 | -552 | -172 | 139 | -142 |
| Spain | 5 100 | 2 105 | 783 | 320 | -150 | 1 153 |
| Sweden | m | m | m | m | m | m |
| Switzerland | m | m | m | m | m | m |
| Turkey | 1 444 | -1 550 | -970 | -388 | 422 | -613 |
| United States | 3 233 | 239 | 608 | 36 | -1 461 | 1 057 |

Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).

Please refer to the Reader's Guide for information concerning the symbols replacing missing data.


StatLink  <http://dx.doi.org/10.1787/888932666703>

Table B7.5. [1/5] Main reforms implemented between 1995 and 2009 on the four factors used to calculate the salary cost of teachers per student**B7**

| | 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 | | | | |
| Australia | There have been no substantial policy reforms on teachers' salaries at the national level over the previous ten years that can be identified as affecting this Indicator 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 this 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 2000, the statutory salary of these two types of teachers gradually became the same. The implementation ended on 1 September 2004. | There was no reform in this area. | 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 is 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 of additional teaching periods. Compared to 2002, about 1.7% additional teaching hours have been awarded on this basis to schools in regular secondary education. |


Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).StatLink  <http://dx.doi.org/10.1787/888932666741>

Table B7.5. [2/5] **Main reforms implemented between 1995 and 2009 on the four factors used to calculate the salary cost of teachers 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 | 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, e.g. in health services. 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 rule 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, e.g. 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 time for teachers 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. |


Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).StatLink  <http://dx.doi.org/10.1787/888932666741>

Table B7.5. [3/5] Main reforms implemented between 1995 and 2009 on the four factors used to calculate the salary cost of teachers 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 | | | | |
| 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. |
| Mexico | There was no reform in this area. | 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 large 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 will 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 workforce 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 (one 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. |


Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).StatLink  <http://dx.doi.org/10.1787/88893266741>

Table B7.5. [4/5] **Main reforms implemented between 1995 and 2009 on the four factors used to calculate the salary cost of teachers 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 | | | | |
| 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 sessions per week) to 3 disciplines (9 sessions 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 this Indicator. | | | |
| 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 <i>canton</i> individually. In the context of the questions on metadata for this Indicator, 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 <i>cantons</i> , but their impact affects only some Swiss teachers and/or students. In the <i>canton</i> 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 | 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. From September 2002 the pay scales were revised (shortened) to the current main (six-point) and upper (three-point) scales. 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. Scotland: A new pay structure was introduced in 2002 following a review in 2000. | 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. 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. | Teachers are contracted to work 1 265 hours per year. There is no statutory amount of teaching time within this. 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. 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. | 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. 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. 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 P1 limit was reduced to 25 in 2007-08 (Government Circular 1/2007). (Other primary classes have a limit of 33.) In secondary education, maths and English classes were reduced to a maximum of 20 pupils by Government Circular 1/2007. |
| 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?nIssueID=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. |


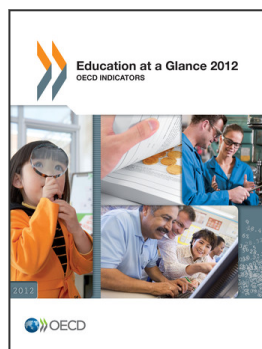
Source: OECD. See Annex 3 for notes (www.oecd.org/edu/eag2012).StatLink  <http://dx.doi.org/10.1787/888932666741>

Table B7.5. [5/5] Main reforms implemented between 1995 and 2009 on the four factors used to calculate the salary cost of teachers 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 |
|------------------|---------------|--|--|--|---|
| Other G20 | 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/eag2012).

StatLink  <http://dx.doi.org/10.1787/888932666741>



From:

Education at a Glance 2012

OECD Indicators

Access the complete publication at:

<https://doi.org/10.1787/eag-2012-en>

Please cite this chapter as:

OECD (2012), "Indicator B7 Which factors influence the level of expenditure?", in *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/eag-2012-22-en>

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