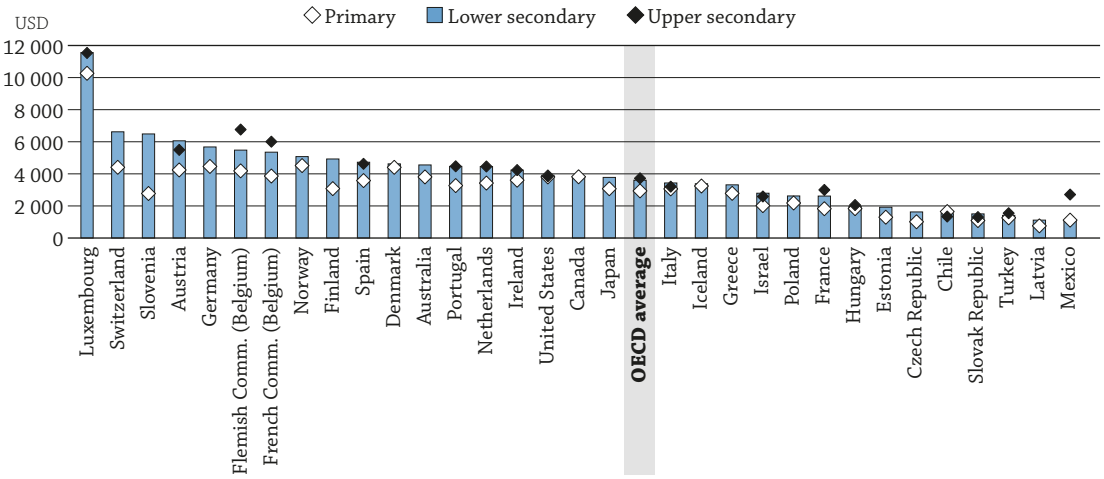
WHICH FACTORS INFLUENCE TEACHERS' SALARY COST?

- The salary cost of teachers per student is calculated using four factors in this analysis: teachers' salaries, instruction time of students, teaching time of teachers and estimated class size (see *Definitions* section at the end of this indicator). Different levels of salary cost of teachers per student result from various different combinations of these four factors.
- On average across OECD countries, the salary cost of teachers per student increases from USD 2 936 in primary education to USD 3 604 in lower secondary education.
- The two main factors influencing the level of teachers' salary cost are teachers' salaries and estimated class size. The relationship between these two factors is positive, meaning that countries with higher teacher salaries tend to have larger estimated class sizes. This reflects the choice some countries have to make between increasing teachers' salaries and hiring more teachers.

Figure C7.1. Annual salary cost of teachers per student in public institutions, by level of education (2016)

USD converted using PPPs for private consumption



Countries and economies are ranked in descending order of the annual salary cost of teachers per student in lower secondary education.

Source: OECD (2018), Table C7.1. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

StatLink https://doi.org/10.1787/888933804964

Context

Governments have become increasingly interested in the relationship between the amount of resources devoted to education and student learning outcomes. They seek to provide more and better education for their population, while ensuring that public funding is used efficiently, particularly when public budgets are tight. Teachers' compensation usually accounts for the largest share of expenditure on education and thus of expenditure per student (Box C7.1). The salary cost of teachers, as calculated in this indicator, is a function of students' instruction time, teachers' teaching time, teachers' salaries and estimated class size (see *Methodology* section at the end of this indicator).

Differences among countries in these four factors may explain differences in the level of expenditure per student. Similarly, a given level of expenditure may be associated with different combinations of these factors. This indicator examines the choices countries make when investing their resources in primary and secondary education and explores how different policy choices related to these four factors affect the salary cost of teachers.

The salary cost of teachers per student can be affected by other variables not directly assessed in this indicator, such as demographic changes. For example, in countries where enrolments have been declining in recent years, class size would also shrink (assuming all other factors remain constant), unless there is a simultaneous drop in the number of teachers as well.

Other findings

- Similar levels of expenditure among countries can mask a variety of contrasting policy choices. For example, Australia and Portugal have very similar teachers' salary costs in lower secondary education, but teachers are better paid in Australia than in Portugal while estimated class size is smaller in Portugal than in Australia. Theoretically, if Portugal increased its estimated class size by five students, teachers' salaries could be equivalent to those in Australia with no increase in public spending.
- The ranking by salary cost of teachers per student changes considerably for a few countries when expressed as a percentage of GDP per capita rather than value in USD. For example, Luxembourg has by far the highest salary cost of teachers per student in lower secondary education: USD 11 560, over three times the OECD average of USD 3 604. However, this cost represents 11.2% of the country's GDP per capita, which is only the tenth highest across OECD countries.
- Given a fixed level of salary cost, a decrease in class size can be compensated by a decrease in teachers' salary, a decrease in instruction time or an increase in teaching time. For example, in Australia, in order to decrease estimated class size by one student and keep the salary cost per student constant, teacher salaries would have to decrease by USD 3 600, annual instruction time would have to decrease by 63 hours, or annual teaching time would have to increase by 54 hours.

Note

The salary cost of teachers per student is estimated based on values for statutory salaries of teachers after 15 years of experience and the most prevalent qualifications (see Indicator D3), theoretical instruction time of students (see Indicator D1) and statutory teaching time of teachers (see Indicator D4). This measure may differ from the actual salary cost of teachers, as a result of the combination of actual average values for these four factors.

The use of statutory salaries means that the level of qualifications and the ageing of the teaching force are not taken into account in this indicator. As teacher salaries tend to vary according to experience and qualifications, an older or more qualified teaching force can lead to a higher salary cost without changes to any of the four factors analysed in this indicator.

Analysis

Variation in the salary cost of teachers per student by level of education

On average across OECD countries and economies, the salary cost of teachers is USD 2 936 per primary student, USD 3 604 per lower secondary student and USD 3 723 per general upper secondary student. Each of these averages masks a wide range of salary costs across countries. For example, in primary education, the salary cost of teachers per student in Luxembourg (USD 10 265) is over 14 times higher than in Latvia (USD 758). Higher salary costs are a result of higher teachers' salaries and/or of more teachers per student, which is itself pushed up by smaller classes, more hours of required instruction time for students or fewer teaching hours for teachers.

The general increase in cost between primary and lower secondary education is the result of increases in teachers' salaries and in instruction time of students, as well as a decrease in teaching time, all of which push up the cost. In 2016, the OECD average statutory salary for teachers with 15 years of experience was USD 44 397 at lower secondary level, around USD 2 200 higher than the salary of teachers at primary level. Moreover, the average annual instruction time in lower secondary education was 118 hours higher than in primary education, while the teaching time was 78 hours lower, implying that more teachers are needed to teach a given number of pupils.

Contrary to the other factors, estimated class size tends to increase between primary and lower secondary education, which partially offsets the increase in cost between the two levels (the OECD average estimated class size increases from 15 students at primary level to 16 students at lower secondary). However, in general, the effect of the larger class size is not enough to offset the increase in cost caused by the other three factors. Chile and Mexico are the only OECD countries where larger estimated class sizes in lower secondary education lead to a lower salary cost of teachers per student at that level than at primary level (Tables C7.5a and b, available on line).

In a few countries, the learning environment and the organisation of schools are relatively similar between primary and lower secondary education. For example, in 2016, the difference between the salary cost of teachers per student in primary and lower secondary was of less than USD 150 in Canada, Hungary, Iceland and the United States. The greatest difference between primary and lower secondary education was over USD 3 700 in Slovenia (Table C7.1).

Variation in the salary cost of teachers per student after accounting for countries' wealth

The level of the salary cost of teachers per student is positively correlated with countries' GDP per capita, so it is important to also take into account relative wealth when comparing across countries. On average across OECD countries, the salary cost of teachers per student represents 6.9% of GDP per capita at primary level, 8.7% at lower secondary level and 8.6% in general programmes at upper secondary level (Table C7.1).

The ranking of a few countries changes once GDP per capita is taken into account. For example, Poland's salary cost of teachers per student in primary education is below the OECD average, at USD 2 183. However, this amount represents 8.0% of the country's GDP per capita, above the OECD average of 6.9%. The opposite happens in Luxembourg. Because of its high teachers' salaries, Luxembourg has by far the highest salary cost of teachers per student in lower secondary education: USD 11 560, over three times the OECD average of USD 3 604. However, this cost represents 11.2% of the country's GDP per capita, which is only the tenth highest across OECD countries.

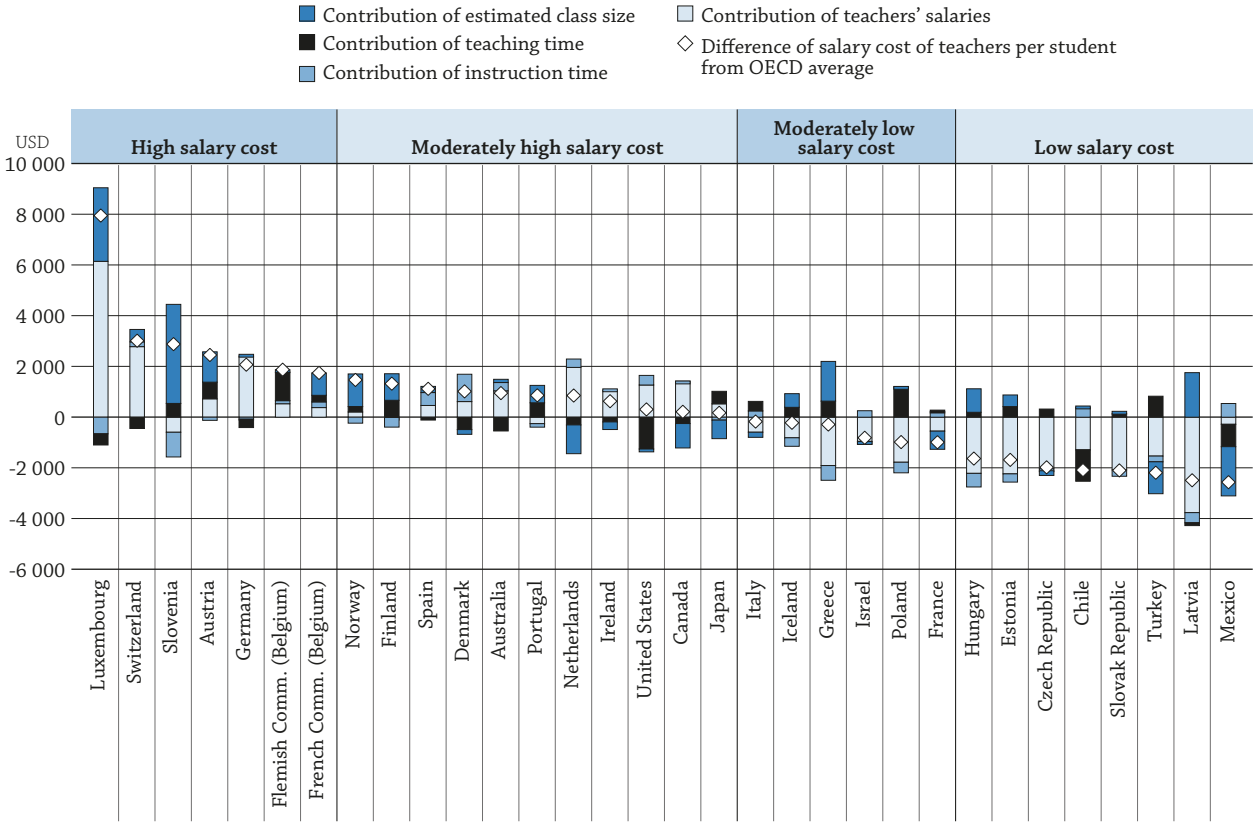
Contribution of each factor to the level of the salary cost of teachers per student

The level of the salary cost of teachers per student is determined by four factors: teachers' salaries, instruction time, teaching time and estimated class size. The impact of the first factor, teachers' salaries, is direct: higher salaries lead to higher salary costs. The other three factors affect the salary cost by changing the number of teachers needed, assuming that the number of students enrolled is constant. If instruction time increases or teaching time decreases, more teachers must be hired to keep class size constant. Similarly, more teachers must be hired in order to decrease class size while keeping everything else constant.

By comparing a country's salary cost to the OECD average, it is possible to determine the contribution of each of the four factors to the difference from the average. In other words, it is possible to assess whether a given salary cost is above average because of higher salaries, higher instruction time, lower teaching time, smaller class sizes or a combination of these four factors. Changes to one of these factors may require compensating trade-offs among the other factors in order to keep the total salary cost constant (Box C7.2).

Figure C7.2. Contribution of various factors to salary cost of teachers per student in public institutions, lower secondary education (2016)

USD converted using PPPs for private consumption



How to read this chart

This figure shows the contribution (in USD) of the factors influencing the difference between salary cost of teachers per student in the country and the OECD average. For example, in Slovenia, the salary cost of teachers per student is USD 2 882 higher than the OECD average. Slovenia has below-average teachers' salaries (- USD 595) and below-average instruction time (- USD 975), both of which push the salary cost of teachers down. However, this is more than compensated for by a lower estimated class size (+ USD 3 909) and lower teaching time (+ USD 543) than the OECD average.

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

Source: OECD (2018), Table C7.3. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

StatLink https://doi.org/10.1787/888933804983

Figure C7.2 shows the wide variety of combinations of the four factors across countries and their different effects on the salary cost of teachers. The magnitude of the contribution of each factor to the difference between a country's salary cost and the OECD average depends on the difference between the factor itself and the respective OECD average. The sum of each factor's contribution equals the difference in salary cost between that country and the OECD average. For example, the salary cost in lower secondary education in Denmark is USD 4 622, USD 1 018 higher than the OECD average. This difference is the result of the contributing effects of the four factors: above-average teachers' salary adds USD 616 to the difference; above-average instruction time adds USD 1 078; above-average teaching time subtracts USD 489; and above-average estimated class size subtracts USD 188.

Different policy choices made by countries with similar spending

Higher levels of expenditure on education cannot automatically be equated with better performance by education systems (OECD, 2016[1]). In addition to the fact that structural changes cannot guarantee better learning outcomes, countries spending similar amounts on education do not necessarily have similar education policies and practices. The OECD countries and economies shown in Figure C7.2 can be divided into four groups with similar teachers' salary cost per student, in order to better illustrate different policy choices that are possible and made by other countries while spending similar amounts.

Group 1: High salary cost of teachers per student in lower secondary education

This group, which has the highest salary cost of teachers per student in lower secondary education, is composed of Austria, the French and Flemish Communities of Belgium, Germany, Luxembourg, Slovenia and Switzerland. The salary cost of teachers per student in this group ranges from USD 5 351 to USD 6 621. Luxembourg is not included in this range because its salary cost per student of USD 11 560 makes it an outlier.

Although most of these countries (with the exception of Slovenia) have above-average GDP per capita, they do not correspond to the five richest OECD countries. Moreover, although Austria, the French and Flemish Communities of Belgium, Luxembourg and Switzerland have among the highest total education expenditure per student, Germany and Slovenia fall close to the OECD average. This reinforces the finding that, although salary cost of teachers is related to GDP per capita and total education expenditure, the relationship is not one to one. Some countries allocate a much higher share of their budget to this type of expenditure than others.

Compared to countries from the other groups, it may seem as though these high-spending countries do not face important trade-offs among the four factors analysed in this indicator. For example, with the exception of Slovenia, all of the countries in this group can afford above-average teacher salaries and below-average class size. However, the magnitude of the difference between these factors and the respective OECD averages vary considerably across these countries.

Group 2: Moderately high salary cost of teachers per student in lower secondary education

This is the largest group, composed of 11 countries with above-average salary costs: Australia, Canada, Denmark, Finland, Ireland, Japan, the Netherlands, Norway, Portugal, Spain and the United States. The salary cost of teachers per student in this group ranges from USD 3 778 to USD 5 075. This group is highly heterogeneous in terms of GDP per capita, education expenditure and even education systems, which sheds light on the many different choices countries with similar spending can make.

One of the main salary cost trade-offs countries face is between teachers' salaries and class size. With the exception of Australia and Portugal, countries in this group have above-average teachers' salaries which are at least partially compensated by larger estimated class sizes. The two exceptions, Australia and Portugal, both have below-average estimated class sizes, but teachers' salaries are relatively high in Australia and relatively low in Portugal. If Portugal increased its estimated class size by five students, teacher salaries could be equivalent to those in Australia, with no increase in spending.

Another potential trade-off observed in some countries is between students' required instruction time and teachers' teaching time. In the Netherlands, for example, instruction time is 77 hours longer per year than the OECD average, but this is almost entirely offset by teaching time that is 53 hours longer than the average. A requirement for more teaching hours, which limits the number of teachers that need to be hired, can also be used to compensate for higher teachers' salaries. This is the case in the United States, where the requirement for 270 teaching hours above the OECD average helps compensate for the additional USD 17 510 teachers receive (teachers' statutory salary in the United States is USD 61 907 compared to the OECD average of USD 44 397).

Group 3: Moderately low salary cost of teachers per student in lower secondary education

This group is composed of six countries with below-average salary cost of teachers per student: France, Greece, Iceland, Israel, Italy and Poland. The salary cost of teachers per student in this group ranges from USD 2 615 to USD 3 432. As was the case with Group 2, despite similar levels of salary cost of teachers per student, this group is highly heterogeneous. Greece and Poland have two of the lowest expenditures per student and GDP per capita, whereas the other countries fall around the OECD averages.

This group could be characterised by below-average teacher salaries that are partially offset by less teaching time. But there are important variations across these countries. France and Poland have nearly the same salary cost of teachers per student, but teachers' salaries in France are 47% higher than in Poland, which is offset by having about five more students per class. In Poland, the main factor pushing up the salary cost is the fact that teachers have the lowest number of teaching hours of all OECD countries and economies (481 hours per year, compared to 684 in France and 697 on average across OECD countries).

Group 4: Low salary cost of teachers per student in lower secondary education

This group is composed of the eight countries with the lowest salary cost of teachers per student in lower secondary education: Chile, the Czech Republic, Estonia, Hungary, Latvia, Mexico, the Slovak Republic and Turkey.

The salary cost of teachers per student in this group ranges from USD 1 039 to USD 1 971. These countries all have below-average GDP per capita and below-average expenditure per student, but there are important differences in their policy choices.

In an overall cross-country comparison, Latvia and the Slovak Republic might have been bundled together as having low salary costs due to below-average salaries and below-average estimated class sizes. However, they have made different policy choices: the Slovak Republic's relatively larger estimated class size allows it to pay teachers over twice as much as Latvia, which has the lowest teachers' salaries and the second lowest estimated class size of all OECD countries. Moreover, Chile spends about as much as the Slovak Republic on the salary cost of teachers per student, but because teaching time in Chile is nearly double that of the Slovak Republic, it can afford more instruction time and higher teachers' salaries.

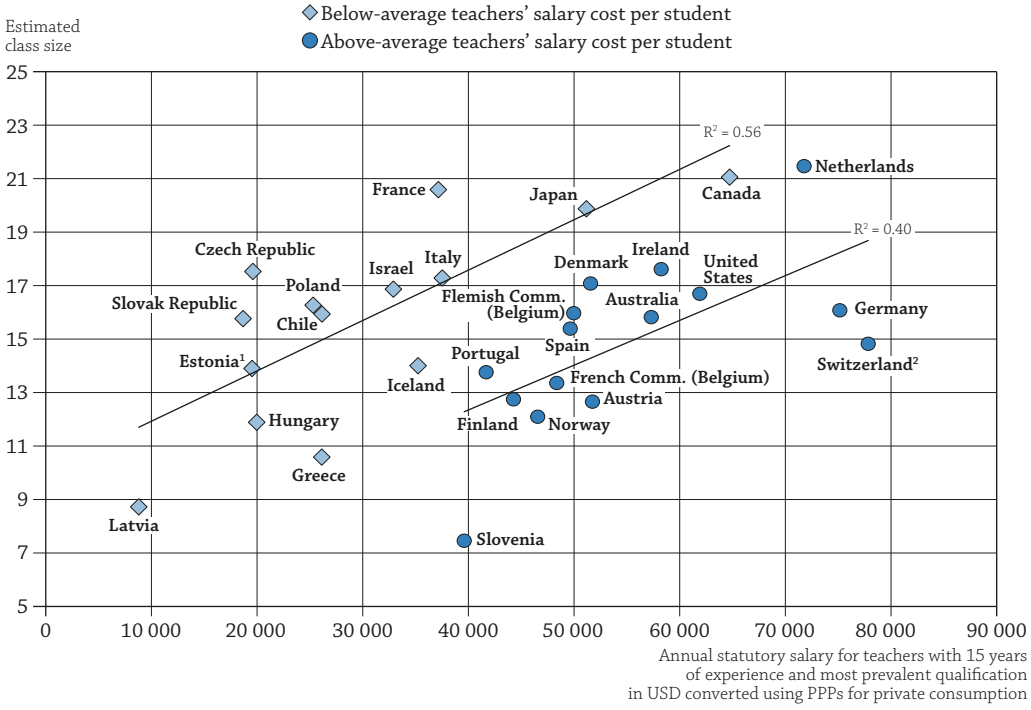
Main factors influencing the level of the salary cost: teachers' salary and estimated class size

At each level of education, teachers' salaries generally have the largest impact on the degree to which countries' salary cost of teachers per student diverges from the OECD average. The second most influential factor is the estimated class size. The trade-off between these two variables, which are often the aim of educational reforms and policies, reflects the choice countries have to make between increasing teachers' salaries and hiring more teachers.

Figure C7.3 plots teachers' salaries against estimated class size, disaggregating between countries with above-average and below-average teachers' salary cost per student. It is important to control for the overall level of spending because, compared to low-spending countries, high-spending countries are able to afford more of everything (i.e. higher salaries and lower class sizes), which may give a misleading impression that they do not face trade-offs within their own budget allocation. The figure shows that, within each group of countries, the relationship between estimated class size and teachers' salary is positive, meaning that countries with higher teacher salaries tend to have larger class sizes.

Figure C7.3. Relationship between teachers' salaries and estimated class size, disaggregated by level of salary cost of teachers per student (2016)

Lower secondary education, public institutions only



Note: Luxembourg, Mexico and Turkey have been removed from the chart and the average because they are outliers for either teacher salaries or estimated class size.

1. Teachers' statutory salaries at the start of their career instead of after 15 years of experience.

2. Teachers' statutory salary with 10 years of experience instead of 15 years.

Source: OECD (2018), Table C7.5b, available on line. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

StatLink https://doi.org/10.1787/888933805002

Smaller class sizes are often seen as beneficial, but there are mixed evidence regarding their impact on student learning. Results from the latest Programme for International Student Assessment (PISA) show that students in larger classes score higher in science, on average across OECD countries. Other research has found that smaller class sizes may be beneficial in some cases, such as for students from disadvantaged backgrounds that may need more individualised attention (Dynarski, Hyman and Schanzenbach, 2013[2]). Given that reducing class size is a costly measure (Box C7.2), it is important to compare its impact to other possible interventions (OECD, 2016[1]).

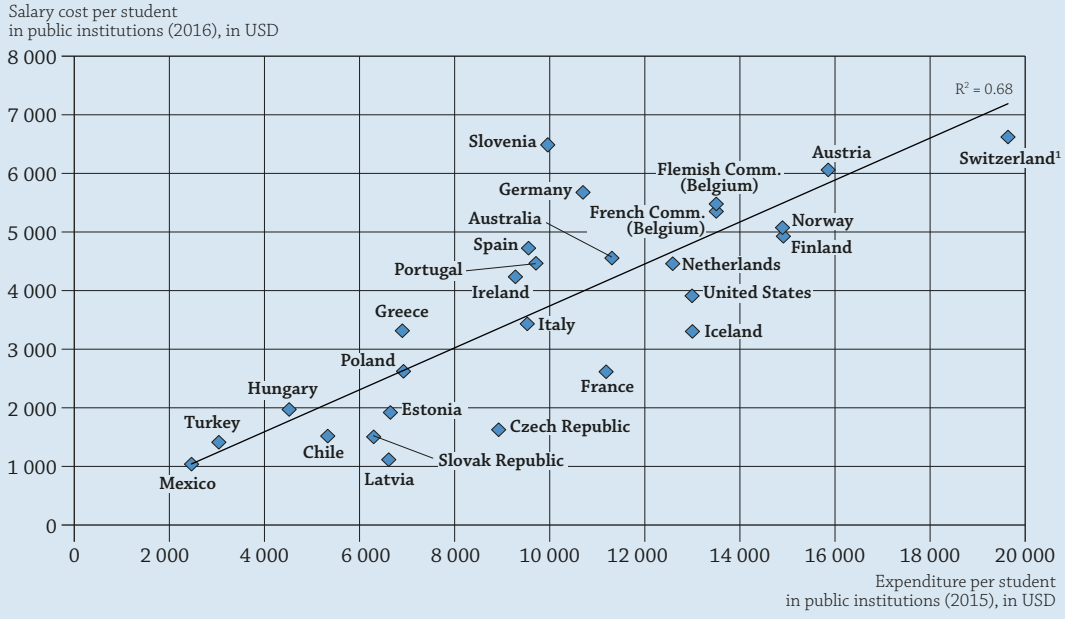
As highlighted in Figure C7.3, one alternative measure is to increase teacher salaries. Evidence from PISA point to the importance of high-quality teaching in improving student outcomes (OECD, 2016[1]) and one way to help school systems attract the best candidates to the teaching profession is by offering higher salaries. However, the need to attract good candidates to the teaching profession and retain the effective ones is not only a matter of raising salaries. It includes, among others, the quality of training before and after entering the profession and of the relationship between teachers and society.

Box C7.1. Relationship between salary cost per student and expenditure per student

Expenditure per student reflects structural and institutional factors, such as the organisation of schools and curricula. Current expenditure on educational institutions can be broken down into compensation of staff and other expenditures (such as maintenance of school buildings, providing students' meals and rental of school buildings and other facilities). Teacher compensation usually constitutes the largest part of current expenditure and therefore of expenditure on education (see Indicator C6). As a result, the level of teacher compensation divided by the number of students – the salary cost of teachers per student – is the largest share of expenditure per student.

Figure C7.a. Relationship between salary cost per student and expenditure per student in lower secondary public institutions (2015, 2016)

Salary cost converted in USD using PPPs for private consumption and expenditure converted using PPPs for GDP



Note: Luxembourg, an outlier, has been removed from the chart in order to improve the visibility. Its expenditure per student is USD 22 927 and teachers' salary cost per student is USD 11 560.
1. Public expenditure only.

Source: OECD (2018), Table C7.1 and Education at a Glance Database, http://stats.oecd.org. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

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Figure C7.a plots the salary cost of teachers per student against expenditure per student in public institutions in lower secondary education. The figure shows that, as expected, there is a strong positive relationship between the two measures. However, the salary cost of teachers can vary considerably, even among countries with a similar level of expenditure per student. Greece and Latvia, for example, both spend around USD 7 000 per student in public institutions, but the salary cost per student in Greece is three times that of Latvia.

These differences highlight the fact that countries not only have to decide how to best allocate salary cost resources across the four factors (instruction time, teaching time, teachers' salaries and estimated class size), but also how much of the total education expenditure will be dedicated to the salary cost of teachers. This decision in itself implies trade-offs with other potential types of expenditure not explored in this indicator, such as non-salary compensation of teachers, salaries of non-teaching staff and infrastructure improvements.

Box C7.2. What could be the trade-offs of decreasing class size by one student?

This indicator assesses the impact of four factors (teacher salaries, instruction time, teaching time and estimated class size) on countries' salary cost of teachers per student and the trade-offs that can exist between them. This analysis can be used to answer the following question: Assuming that the number of students and the salary cost remain constant, what could be potential trade-offs among the other factors which would compensate for the smaller class size? More specifically, by how much would salaries or instruction time have to decrease, or teaching time have to increase, in order to maintain the same salary cost?

Table C7.a presents the results for this simulation. For each factor, the value is calculated keeping everything else constant. For example, in Australia, in order to decrease estimated class size by one student and keep the salary cost per student constant, teacher salaries would have to decrease by USD 3 600, annual instruction time would have to decrease by 63 hours, or annual teaching time would have to increase by 54 hours. Any one of these trade-offs would compensate for the additional cost of the decrease in class size, without any change to the total salary cost of teachers per student.

These results emphasise the fact that decreasing class size, by as little as one student, comes with a price tag. Indeed, class size has been decreasing in several OECD countries over recent years (OECD, 2016[3]), though often as a result of demographic changes rather than of active policy choices. Class sizes tend to decrease with student enrolment because of the political, economic and organisational challenges of simultaneously decreasing the number of teachers. However, in the long term, a non-reduction of the teaching force is in itself a policy choice that will keep classes smaller. Table C7.a shows that the price of the smaller class sizes can either be reflected in a higher salary cost, or it can be offset by changes to the other three factors.

It is important to assess the results presented in Table C7.a by taking into account the current values of each factor in the country. For example, Chile already has the longest teaching time of all OECD countries, so further increases to compensate for smaller class size may not be feasible or desirable.

This simulation is not meant to assess the real cost of reforms. The simple model only takes into account four factors, and it only shows the trade-off of one factor at a time. In reality, trade-offs will often consist of changes across several factors at the same time. Moreover, important regional variations, not captured in this indicator, may require specific policies that would not necessarily be reflected on the national averages. Instead, this analysis is only meant to highlight the importance of trade-offs in policy decisions, and to provide some guidance as to the direction and magnitude of the potential trade-offs across the four factors assessed in this indicator.

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Table C7.a. Keeping salary cost constant, what could be the trade-offs of decreasing class size, by one student? (2016)

Lower secondary education, public institutions only

	Teacher salaries (in equivalent USD per year)	Instruction time (in hours per year)	Teaching time (in hours per year)
	(1)	(2)	(3)
Australia	-3 600	-63	54
Austria	-4 100	-71	52
Canada	-3 100	-44	37
Chile	-1 600	-67	78
Czech Republic	-1 100	-51	37
Denmark	-3 000	-70	49
Estonia[1]	-1 400	-59	47
Finland	-3 500	-66	51
Flemish Comm. (Belgium)	-3 100	-59	36
France	-1 800	-48	35
French Comm. (Belgium)	-3 600	-73	53
Germany	-4 700	-57	50
Greece	-2 500	-74	61
Hungary	-1 700	-64	60
Iceland	-2 500	-60	48
Ireland	-3 300	-53	44
Israel	-2 000	-59	44
Italy	-2 200	-57	38
Japan	-2 600	-45	32
Latvia	-1 000	-91	93
Luxembourg	-10 100	-78	75
Mexico	- 900	-28	26
Netherlands	-3 300	-47	37
Norway	-3 900	-72	60
Poland	-1 600	-50	31
Portugal	-3 000	-65	47
Slovak Republic	-1 200	-53	45
Slovenia	-5 300	-103	97
Spain	-3 200	-68	50
Switzerland[2]	-5 300	-65	55
Turkey	- 800	-31	19
United States	-3 700	-61	62

Note: Teachers' salaries used in the calculation of this indicator refer to the annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and most prevalent qualification (Indicator D3). Instruction time refers to the average number of hours per year of compulsory instruction time (Indicator D1) and teaching time refers to the statutory net teaching hours over the school year (Indicator D4). The reference year for these factors may differ by one year for some countries. See Table C7.5b, available on line, for notes on each factor.

1. Teachers' statutory salaries at the start of their career instead of after 15 years of experience.

2. Teachers' statutory salaries after 10 years of experience instead of 15 years.

Source: OECD (2018), Table C7.5b, available on line. See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

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

StatLink https://doi.org/10.1787/888933805040

Definitions

Instruction time refers to the time a public school is expected to provide instruction to students on all the subjects integrated into the compulsory and non-compulsory curriculum, on school premises or in before or after-school activities that are formal parts of the compulsory programme.

Teachers' teaching time is the annual average number of hours that full-time teachers teach a group or class of students including all extra hours, such as overtime.

Teachers' salary refers to the annual statutory salary of teachers after 15 years of experience, converted to USD using PPPs for private consumption.

Methodology

The salary cost of teachers per student (SCS) is calculated as:

$$SCS = Teacher\ salary * Instruction\ time * \frac{1}{Teaching\ time} * \frac{1}{Estimaed\ class\ size}$$

Where estimated class size is calculated as:

$$Estimated\ class\ size = \frac{Instruction\ time}{Teaching\ time} * \frac{Students}{Teachers}$$

The contribution of each factor to the level of the salary cost of teachers per student is analysed by comparing the salary cost of teachers per student in each country to the OECD average and then calculating the contribution of these different factors to the variation from the OECD average. This exercise is based on a mathematical relationship between the various factors and follows the method presented in the Canadian publication *Education Statistics Bulletin* (Quebec Ministry of Education, Recreation and Sports, 2003[4]). 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.

Please see the *OECD Handbook for Internationally Comparative Education Statistics 2018* (OECD, 2018[5]) for more information and Annex 3 for country-specific notes (http://dx.doi.org/10.1787/eag-2018-36-en).

Lithuania was not an OECD member at the time of preparation of this publication. Accordingly, Lithuania does not appear in the list of OECD members and is not included in the zone aggregates.

Source

Data referring to the 2016 school year are based on the UOE data collection on education statistics and on the Survey on Teachers and the Curriculum, which were both administered by the OECD in 2016.

Note regarding data from Israel

The statistical data for Israel are supplied by and are 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.

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Indicator C7 Tables

StatLink https://doi.org/10.1787/888933804888

Table C7.1	Salary cost of teachers per student, by level of education (2016)
Table C7.2	Contribution of various factors to salary cost of teachers per student in primary education (2016)
Table C7.3	Contribution of various factors to salary cost of teachers per student in lower secondary education (2016)

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WEB **Table C7.4 Contribution of various factors to salary cost of teachers per student in general programmes of upper secondary education (2016)**

WEB **Table C7.5a Factors used to compute the salary cost of teachers per student in public institutions, in primary education (2016)**

WEB **Table C7.5b Factors used to compute the salary cost of teachers per student in public institutions, in lower secondary education (2016)**

WEB **Table C7.5c Factors used to compute the salary cost of teachers per student in public institutions, in general programmes of upper secondary education (2016)**

Cut-off date for the data: 18 July 2018. Any updates on data can be found on line at http://dx.doi.org/10.1787/eag-data-en. Data can also be found at http://stats.oecd.org/, Education at a Glance Database.

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Table C7.1. Salary cost of teachers per student, by level of education (2016)

Annual salary cost of teachers per student in public institutions, in equivalent USD, converted using PPPs for private consumption, and in percentage of GDP per capita

	Salary cost of teachers per student (in USD, 2016 constant prices)			Salary cost of teachers per student (in percentage of GDP per capita)		
	Primary	Lower secondary	Upper secondary, general programmes	Primary	Lower secondary	Upper secondary, general programmes
	(1)	(2)	(3)	(4)	(5)	(6)
OECD **Countries**						
Australia	3 808	4 555	m	8.0	9.6	m
Austria	4 243	6 059	5 493	8.4	11.9	10.8
Canada	3 817	3 817	m	8.5	8.5	m
Chile	1 649	1 518	1 339	7.2	6.6	5.9
Czech Republic	1 013	1 626	m	2.9	4.7	m
Denmark	4 405	4 622	m	9.0	9.4	m
Estonia	1 296	1 920	m	4.5	m	m
Finland	3 080	4 927	m	7.1	11.3	m
France	1 827	2 615	2 999	4.4	6.3	7.2
Germany	4 461	5 676	m	9.1	11.6	m
Greece	2 782	3 315	m	10.4	12.4	m
Hungary	1 832	1 971	2 054	6.9	7.4	7.7
Iceland	3 241	3 383	m	6.3	6.6	m
Ireland	3 602	4 235	4 235	5.0	5.9	5.9
Israel	2 020	2 793	2 589	5.4	7.4	6.9
Italy	3 060	3 432	3 202	8.0	8.9	8.3
Japan	3 073	3 778	m	7.3	8.9	m
Korea	m	m	m	m	m	m
Latvia	758	1 115	m	3.0	4.4	m
Luxembourg	10 265	11 560	11 535	9.9	11.2	11.2
Mexico	1 115	1 039	2 709	6.0	5.5	14.5
Netherlands	3 424	4 459	4 459	6.8	8.8	8.8
New Zealand	m	m	m	m	m	m
Norway	4 516	5 075	m	8.8	9.9	m
Poland	2 183	2 623	m	8.0	9.6	m
Portugal	3 268	4 466	4 470	10.7	14.6	14.6
Slovak Republic	1 089	1 504	1 304	3.6	4.9	4.3
Slovenia	2 775	6 487	m	8.5	19.8	m
Spain	3 580	4 724	4 624	9.9	13.0	12.7
Sweden	m	m	m	m	m	m
Switzerland	4 407	6 621	m	6.9	10.3	m
Turkey	1 258	1 412	1 546	4.9	5.5	6.1
United States	3 808	3 911	3 847	6.6	6.8	6.6
Economies						
Flemish Comm. (Belgium)	4 186	5 479	6 761	9.0	11.8	14.5
French Comm. (Belgium)	3 863	5 351	6 004	8.3	11.5	12.9
England (UK)	m	m	m	m	m	m
Scotland (UK)	m	m	m	m	m	m
OECD average[1]	2 936	3 604	3 723	6.9	8.7	8.6

Note: Teachers' salaries used in the calculation of this indicator refer to the annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and most prevalent qualification (Indicator D3). Instruction time refers to the average number of hours per year of compulsory instruction time (Indicator D1) and teaching time refers to the statutory net teaching hours over the school year (Indicator D4). The reference year for these factors may differ by one year for some countries. See Tables C7.5a, b and c, available on line, for notes on each factor.

1. The OECD average only includes countries and economies with data for all factors used to calculate salary cost.

Source: OECD (2018). See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

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

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Table C7.2. Contribution of various factors to salary cost of teachers per student in primary education (2016)

In equivalent USD, converted using PPPs for private consumption

		Salary cost of teachers per student (2016)	Difference (in USD) from the 2016 OECD average of **USD 2 936**	Contribution of the underlying factors to the difference from the OECD average			
				Effect (in USD) of teachers' salary below/above the 2016 OECD average of **USD 42 193**	Effect (in USD) of instruction time (for students) below/above the 2016 OECD average of **805 hours**	Effect (in USD) of teaching time (for teachers) below/above the 2016 OECD average of **775 hours**	Effect (in USD) of estimated class size below/above the 2016 OECD average of **15 students per class**
		(1)	(2) = (3)+(4)+(5)+(6)	(3)	(4)	(5)	(6)
OECD	**Countries**						
	Australia	3 808	**872**	1 031	734	- 365	- 528
	Austria	4 243	**1 307**	551	- 480	- 21	1 257
	Canada	3 817	**881**	1 456	454	- 100	- 930
	Chile	1 649	**-1 287**	-1 084	596	- 914	114
	Czech Republic	1 013	**-1 923**	-1 387	- 283	447	- 700
	Denmark	4 405	**1 469**	681	966	- 43	- 135
	Estonia[1]	1 296	**-1 639**	-1 814	- 422	618	- 22
	Finland	3 080	**144**	- 88	- 734	394	572
	France	1 827	**-1 109**	- 454	167	- 351	- 471
	Germany	4 461	**1 525**	1 813	- 498	- 126	336
	Greece	2 782	**- 154**	-1 406	- 72	472	852
	Hungary	1 832	**-1 104**	-1 804	- 470	433	738
	Iceland	3 241	**305**	- 562	- 312	674	504
	Ireland	3 602	**666**	1 024	421	- 550	- 229
	Israel	2 020	**- 916**	- 852	443	- 224	- 283
	Italy	3 060	**124**	- 612	305	36	395
	Japan	3 073	**137**	582	- 164	130	- 412
	Korea	m	**m**	m	m	m	m
	Latvia	758	**-2 177**	-2 652	- 569	151	891
	Luxembourg	10 265	**7 329**	5 102	852	- 276	1 652
	Mexico	1 115	**-1 821**	- 617	- 13	- 62	-1 129
	Netherlands	3 424	**488**	989	497	- 589	- 409
	New Zealand	m	**m**	m	m	m	m
	Norway	4 516	**1 580**	365	- 276	166	1 325
	Poland	2 183	**- 753**	-1 330	- 624	829	372
	Portugal	3 268	**332**	- 38	64	132	173
	Slovak Republic	1 089	**-1 847**	-1 503	- 307	- 68	31
	Slovenia	2 775	**- 161**	- 182	- 552	609	- 36
	Spain	3 580	**644**	179	- 58	- 418	941
	Sweden	m	**m**	m	m	m	m
	Switzerland[2]	4 407	**1 471**	1 759	42	- 196	- 135
	Turkey	1 258	**-1 678**	-1 168	- 227	151	- 433
	United States	3 808	**872**	1 190	634	- 891	- 60
	Economies						
	Flemish Comm. (Belgium)	4 186	**1 250**	596	72	122	460
	French Comm. (Belgium)	3 863	**927**	461	181	267	18
	England (UK)	m	**m**	m	m	m	m
	Scotland (UK)	m	**m**	m	m	m	m

Note: Teachers' salaries used in the calculation of this indicator refer to the annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and most prevalent qualification (Indicator D3). Instruction time refers to the average number of hours per year of compulsory instruction time (Indicator D1) and teaching time refers to the statutory net teaching hours over the school year (Indicator D4). The reference year for these factors may differ by one year for some countries. See Table C7.5a, available on line, for notes on each factor.

1. Teachers' statutory salaries at the start of their career instead of after 15 years of experience.

2. Teachers' statutory salaries after 10 years of experience instead of 15 years.

Source: OECD (2018). See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

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

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Table C7.3. Contribution of various factors to salary cost of teachers per student in lower secondary education (2016)

In equivalent USD, converted using PPPs for private consumption

		Salary cost of teacher per student (2016)	Difference (in USD) from the 2016 OECD average of **USD 3 604**	Contribution of the underlying factors to the difference from the OECD average			
				Effect (in USD) of teachers' salary below/above the 2016 OECD average of **USD 44 397**	Effect (in USD) of instruction time (for students) below/above the 2016 OECD average of **923 hours**	Effect (in USD) of teaching time (for teachers) below/above the 2016 OECD average of **697 hours**	Effect (in USD) of estimated class size below/above the 2016 OECD average of **16 students per class**
		(1)	(2) = (3) + (4) + (5) + (6)	(3)	(4)	(5)	(6)
OECD	**Countries**						
	Australia	4 555	**951**	1 039	328	- 544	127
	Austria	6 059	**2 455**	726	- 124	656	1 198
	Canada	3 817	**213**	1 421	6	- 251	- 963
	Chile	1 518	**-2 087**	-1 288	381	-1 239	60
	Czech Republic	1 626	**-1 979**	-2 037	- 75	321	- 187
	Denmark	4 622	**1 018**	616	1 078	- 489	- 188
	Estonia[1]	1 920	**-1 685**	-2 236	- 325	417	459
	Finland	4 927	**1 322**	- 12	- 380	667	1 047
	France	2 615	**- 989**	- 550	222	57	- 717
	Germany	5 676	**2 072**	2 410	- 71	- 338	71
	Greece	3 315	**- 289**	-1 908	- 582	633	1 568
	Hungary	1 971	**-1 633**	-2 216	- 537	193	927
	Iceland	3 383	**- 221**	- 813	- 337	389	540
	Ireland	4 235	**630**	1 065	52	- 187	- 301
	Israel	2 793	**- 812**	- 955	255	- 7	- 105
	Italy	3 432	**- 172**	- 593	248	375	- 202
	Japan	3 778	**174**	527	- 115	493	- 732
	Korea	m	**m**	m	m	m	m
	Latvia	1 115	**-2 489**	-3 766	- 399	- 82	1 757
	Luxembourg	11 560	**7 956**	6 150	- 656	- 440	2 903
	Mexico	1 039	**-2 566**	- 281	540	- 882	-1 943
	Netherlands	4 459	**854**	1 964	330	- 305	-1 135
	New Zealand	m	**m**	m	m	m	m
	Norway	5 075	**1 470**	206	- 236	213	1 287
	Poland	2 623	**- 982**	-1 778	- 417	1 203	11
	Portugal	4 466	**861**	- 255	- 139	568	687
	Slovak Republic	1 504	**-2 100**	-2 082	- 249	143	89
	Slovenia	6 487	**2 882**	- 595	- 975	543	3 909
	Spain	4 724	**1 120**	462	510	- 95	243
	Sweden	m	**m**	m	m	m	m
	Switzerland[2]	6 621	**3 016**	2 784	190	- 446	488
	Turkey	1 412	**-2 192**	-1 535	- 225	828	-1 260
	United States	3 911	**306**	1 270	379	-1 255	- 87
	Economies						
	Flemish Comm. (Belgium)	5 479	**1 874**	531	122	1 124	98
	French Comm. (Belgium)	5 351	**1 746**	379	224	260	884
	England (UK)	m	**m**	m	m	m	m
	Scotland (UK)	m	**m**	m	m	m	m

Note: Teachers' salaries used in the calculation of this indicator refer to the annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and most prevalent qualification (Indicator D3). Instruction time refers to the average number of hours per year of compulsory instruction time (Indicator D1) and teaching time refers to the statutory net teaching hours over the school year (Indicator D4). The reference year for these factors may differ by one year for some countries. See Table C7.5b, available on line, for notes on each factor.

1. Teachers' statutory salaries at the start of their career instead of after 15 years of experience.

2. Teachers' statutory salaries after 10 years of experience instead of 15 years.

Source: OECD (2018). See *Source* section for more information and Annex 3 for notes (http://dx.doi.org/10.1787/eag-2018-36-en).

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

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