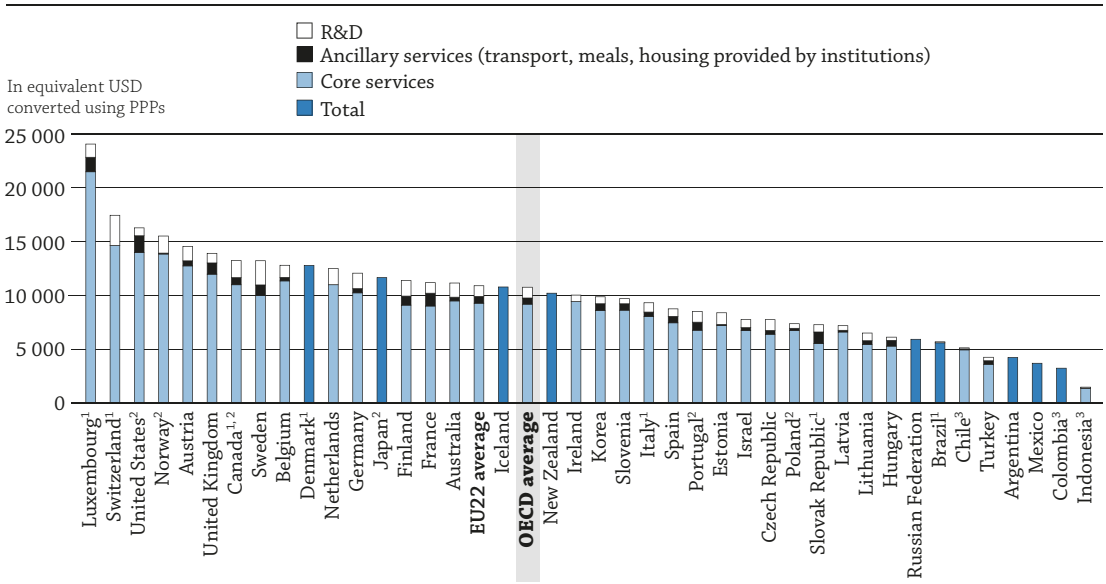
HOW MUCH IS SPENT PER STUDENT?

- On average, OECD countries spend USD 10 759 a year on educational institutions to educate each student (from primary to tertiary education), broken down as USD 8 733 per primary student, USD 10 235 per lower secondary student, USD 10 182 per upper secondary student and USD 16 143 per tertiary student.
- In primary, secondary and post-secondary non-tertiary education, 94% of institutions' expenditure per student is devoted to core educational services such as teaching costs (USD 8 948 per student), and only 6% is devoted to ancillary services such as student welfare (USD 540). At the tertiary level, a much lower share of institutional expenditure goes to core services (64%), while roughly one-third of total educational expenditure per student (USD 5 084) is on research and development.
- From 2008 to 2014, expenditure on primary, secondary and post-secondary non-tertiary educational institutions increased by 8% on average across OECD countries, while the number of students decreased by 2%, resulting in an increase of 10% in expenditure per student over the same period.

Figure B1.1. Annual expenditure by educational institutions per student, by types of service (2014)

In equivalent USD converted using PPPs, based on full-time equivalents, from primary to tertiary education



Note: PPP and USD stand for purchasing power parity and United States dollars respectively.
1. Public institutions only (for Italy, for primary and secondary education; for Canada and Luxembourg, for tertiary education and from primary to tertiary; for the Slovak Republic, for bachelor's, master's and doctoral degrees).
2. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
3. Year of reference 2015.
Countries are ranked in descending order of total expenditure per student by educational institutions.
Source: OECD/UIS/Eurostat (2017), Table B1.2. See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
StatLink http://dx.doi.org/10.1787/888933557793

Context

The willingness of policy makers to expand access to educational opportunities and to provide high-quality education can translate into higher costs per student, and must be balanced against other demands on public expenditure and the overall tax burden. As a result, the question of whether the resources devoted to education yield adequate returns features prominently in public debate. Although it is difficult to assess the optimal volume of resources needed to prepare each student for life and work in modern societies, international comparisons of spending by educational institutions per student (see *Definitions* and *Methodology* sections) can provide useful reference points.

Expenditure per student by educational institutions is largely influenced by teachers' salaries (see Indicators B7 and D3), pension systems, instructional and teaching hours (see Indicator B7), the cost of teaching materials and facilities, the programme provided (e.g. general or vocational) and the number of students enrolled in the education system (see Indicator C1). Policies to attract new teachers, reduce average class size or change staffing patterns (see Indicator D2) have also affected per-student expenditure. Ancillary and research and development (R&D) services can also influence the level of expenditure per student.

Other findings

- In almost all countries, expenditure by educational institutions per student increases along with educational level, with the exception of post-secondary non-tertiary education, where expenditure per student is lower than in other levels on average.
- The orientation of secondary school programmes influences expenditure by educational institutions per student in most countries. Among the 26 OECD countries with separate data on expenditure per student for general and vocational programmes at the upper secondary and post-secondary non-tertiary levels, an average of USD 855 more was spent per student in a vocational programme than in a general programme in 2014.
- Excluding activities peripheral to instruction (R&D and ancillary services, such as student welfare services), OECD countries annually spend an average of USD 9 189 per student from primary to tertiary education.
- On average, OECD countries spend around 70% more per student at tertiary level than at primary, secondary and post-secondary non-tertiary levels combined. R&D activities or ancillary services can account for a significant proportion of expenditure at tertiary level (36% on average), but even when these are excluded, expenditure per student on core educational services at tertiary level is still on average 16% higher than at primary, secondary and post-secondary non-tertiary levels.
- Students are expected to spend an average of six years in primary education, leading to a total per-student cost of USD 51 266 over this period. The sum is even higher for secondary education, where students are expected to spend seven years, costing a total of USD 72 371 each. At the end of their primary and secondary studies, the total expenditure adds up to USD 123 637 per student.
- Annual expenditure per student by educational institutions at primary amounts to 22% of GDP per capita on average across the OECD, while at the secondary level represents a 25%. This figure is much higher at tertiary level, where countries spend on average 40% of the country's GDP per capita on funding bachelor's, master's and doctoral degrees.

B1

Analysis

Expenditure per student by educational institutions

In 2014, annual spending per student from primary to tertiary education ranged from around USD 1 500 in Indonesia to nearly USD 25 000 in Luxembourg (Table B1.1 and Figure B1.2). Even in those countries where per-student expenditures are similar, allocations of resources to the various levels of education can vary widely. The OECD average amount spent by educational institutions per primary student amounts to USD 8 733, but ranges from less than USD 1 500 per student in Indonesia, to more than USD 21 000 in Luxembourg (Table B1.1 and Figure B1.2). While the typical amount spent on each secondary student is USD 10 106, this average spans a per-student expenditure of USD 1 175 in Indonesia to more than USD 21 500 in Luxembourg. For tertiary level students, the higher average of USD 16 143 is explained by high expenditures – more than USD 20 000 – in a few OECD countries, notably Canada, Luxembourg, Norway, Sweden, Switzerland, the United Kingdom and the United States.

These differences in annual expenditure by educational institutions per student at each level of education can also lead to large differences in the cumulative expenditure per student over the duration of studies (see below, and Table B1.4, available on line).

Expenditure per student by educational institutions rises with the level of education in almost all countries, but the size of the differentials varies markedly across countries (Table B1.1). On average, expenditure on secondary education is 1.2 times greater than expenditure on primary education. This ratio reaches or exceeds 1.5 in the Czech Republic, France, Hungary and the Netherlands, but is lower than 1 in Denmark, Iceland, Indonesia, Poland, Slovenia and Turkey. Similarly, educational institutions in OECD countries spend an average of 1.8 times more on each tertiary student than they do on each primary student. However, spending patterns vary widely, mainly because education policies vary more at the tertiary level (see Indicator B5). For example, Canada, France, Hungary, Luxembourg, the Netherlands, Sweden, Turkey and the United States spend between 2.2 and 2.6 times more on a tertiary student than on a primary student, but Brazil and Mexico spend 3 times as much (Table B1.1).

These comparisons are based on purchasing power parities (PPPs) for GDP, not on market exchange rates. Therefore, they reflect the amount of a national currency required to produce the same basket of goods and services in a given country as produced by the United States in USD (see *Methodology* section).

Expenditure per student differences between upper secondary general and vocational programmes

On average across the 26 OECD countries for which data are available, USD 855 more is spent per student in vocational than in general programmes at upper secondary level. However, this masks large differences in expenditure per student within countries. In 6 of the 26 OECD countries, expenditure per student in educational institutions is higher for general programmes than vocational programmes. In the case of Australia, for example, USD 6 434 more is spent per student in general programmes than in vocational programmes. On the other hand, countries like Germany and Sweden spend over USD 4 000 more per student in vocational programmes. Luxembourg and Norway spend the most on upper secondary vocational education (USD 22 964 and USD 16 523 respectively), amounts which are similar to their spending on general programmes at the same level (USD 21 809 in Luxembourg and USD 15 561 in Norway). Underestimation of the expenditure by private enterprises on dual vocational programmes can partly explain these spending differences between general and vocational programmes (see Table C1.3).

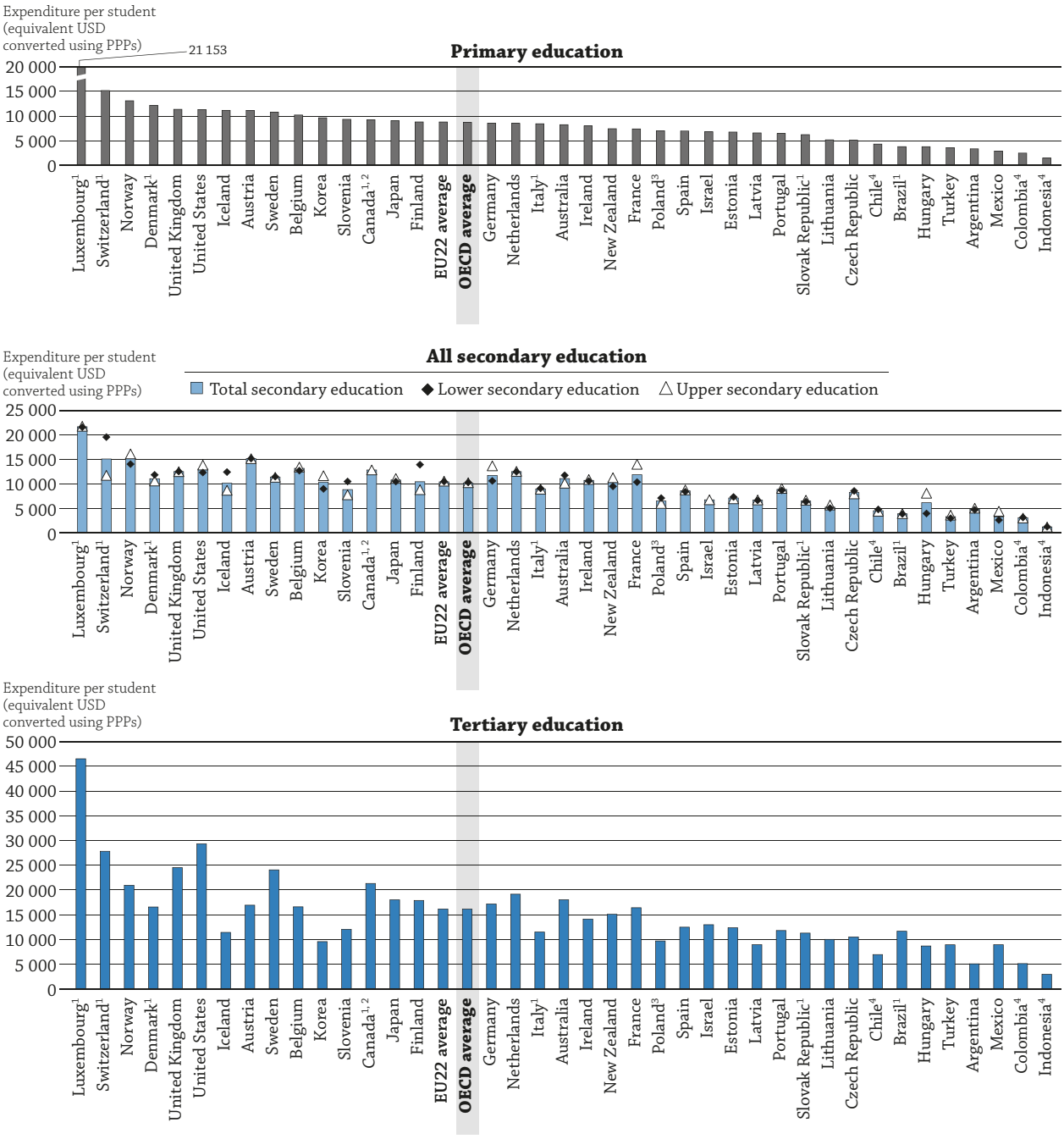
Expenditure per student on core education services, ancillary services and R&D

On average across OECD countries, expenditure on core education services (such as teaching costs) represents 85% of total expenditure per student from primary to tertiary education, and exceeds 90% in Chile, Indonesia, Ireland, Latvia and Poland. Only in France and the Slovak Republic ancillary services (non-educational services including student welfare, transport, meals and housing provided by educational institutions) account for over 10% of the expenditure per student.

However, this overall picture masks large variations among the levels of education (Table B1.2). At primary, secondary and post-secondary non-tertiary levels, expenditure is dominated by spending on core education services. On average, OECD countries for which data are available spend 94% of the total per-student expenditure (or USD 8 948) on core educational services. However, in Finland, France, the Slovak Republic and Sweden, ancillary services account for over 10% of the expenditure per student (Table B1.2).

Figure B1.2. Annual expenditure per student by educational institutions for all services, by level of education (2014)

Expenditure on core, ancillary services and R&D, in equivalent USD converted using PPPs, based on full-time equivalents



Note: PPP and USD stand for purchasing power parity and United States dollars respectively.

1. Public institutions only (for Italy, for primary and secondary education; for Canada and Luxembourg, for tertiary education and from primary to tertiary; for the Slovak Republic, for bachelor's, master's and doctoral degrees).

2. Primary education includes data from pre-primary and lower secondary education.

3. Upper secondary education includes information from vocational programmes in lower secondary education.

4. Year of reference 2015.

Countries are ranked in descending order of expenditure on educational institutions per student in primary education.

Source: OECD/UIS/Eurostat (2017), Table B1.1. See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933557812

At tertiary level, educational core services also make up the largest expenditure in all countries (USD 10 348 per student on average), ranging from USD 2 562 in Indonesia, and more than USD 30 700 in Luxembourg (Table B1.2). Ancillary services are even less important in tertiary education than at lower levels. On average, a mere 4% of expenditure on tertiary institutions targets ancillary services, and in the Czech Republic, Estonia, Finland, Ireland, Israel, Korea, the Netherlands, Sweden and Switzerland the sum is negligible. The United Kingdom and the United States stand out for spending over USD 3 000 on ancillary services per student in their tertiary institutions. However, across all countries R&D takes up a large part of the tertiary budget, accounting for 31% of expenditure per student on average, but rising to over 50% in Sweden (USD 13 137) and Switzerland (USD 15 229). In the OECD countries in which most R&D is conducted in tertiary educational institutions (e.g. Portugal and Switzerland, and Sweden for publicly funded R&D), expenditure per student in these activities is higher. Other countries may have lower R&D expenditure per student because a large proportion of research is performed outside the academic environment.

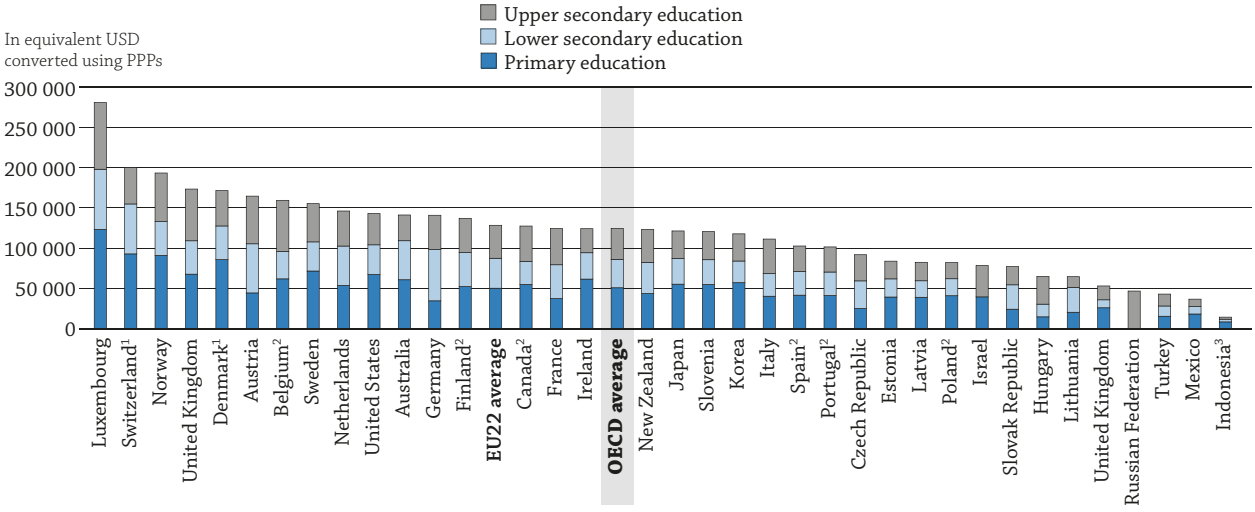
Cumulative expenditure over the expected duration of studies

The resources that countries can devote to education can help to explain the variation of outcomes of education systems (Box B1.1). In order to compare how costly education is across countries, it is important to consider not only the yearly expenditure per student, but also the cumulative expenditure students incur over the total period they are expected to spend at that educational level. High expenditure per student, for example, might be offset by short programmes or weaker access to education in certain levels. On the other hand, a seemingly inexpensive education system can prove to be costly overall if enrolment is high and students spend more time in school.

Primary and secondary education are usually compulsory across the OECD, and the expected cumulative expenditure per student at these levels shows how much a student will cost based on the current compulsory education (Figure B1.3 and Table B1.4, available on line). On average across OECD countries, students are expected to be enrolled at primary or secondary school for a total of 13 years. This adds up to a total cumulative expenditure of USD 123 637 per student. Luxembourg and Switzerland spend over USD 195 000 per student across those two levels, while in Indonesia and Mexico, the figure is below USD 40 000.

Figure B1.3. Cumulative expenditure per student by educational institutions over the expected duration of primary and secondary studies (2014)

Annual expenditure on educational institutions per student multiplied by the theoretical duration of studies, in equivalent USD converted using PPPs



Note: Cumulative expenditure per student by educational institution is calculated using expected years in education. PPP and USD stand for purchasing power parity and United States dollars, respectively.

1. Public institutions only.

2. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.

3. Year of reference 2015.

Countries are ranked in descending order of the total expenditure on educational institutions per student over the theoretical duration of primary and secondary studies.

Source: OECD/UIS/Eurostat (2017), Table B1.4, available on line. See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

StatLink http://dx.doi.org/10.1787/888933557831

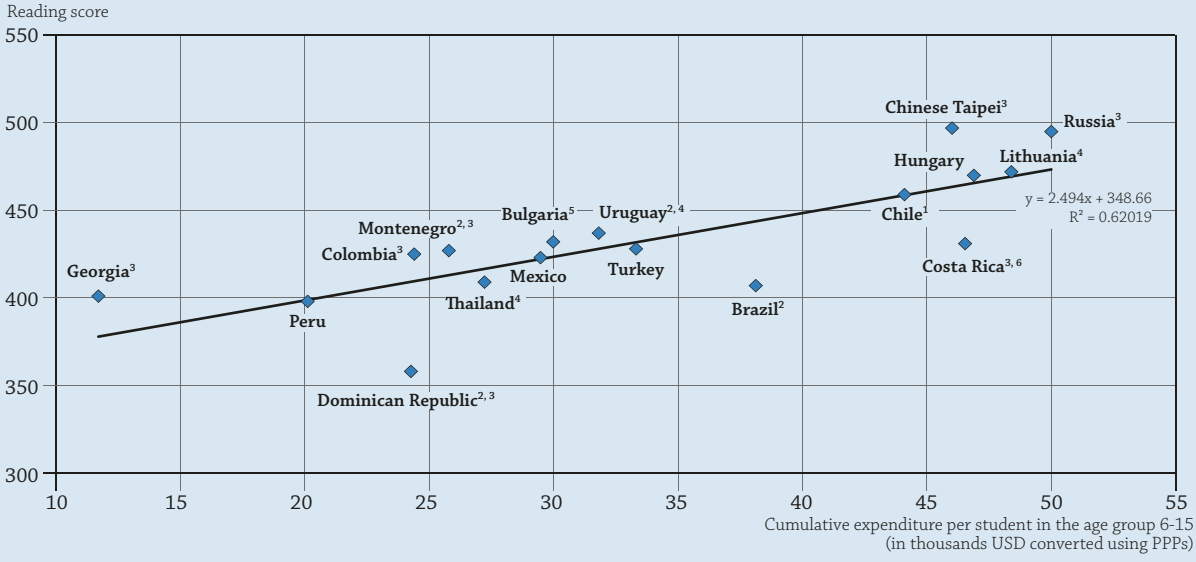
Box B1.1 The link between cumulative education spending per student and reading performance in PISA

Wealthier countries can afford to spend more on education and at the same time, the resources countries can devote to education are an important element in the variation of outcomes of education systems. Figure B1.a compares countries investing less than USD 50 000 per student with their reading scores in the 6-15 age group as measured by the Programme for International Student Assessment (PISA) (OECD, 2016). Cumulative expenditure per student is computed by multiplying public and private expenditure on educational institutions per student in 2014 at each level of education by the theoretical duration of education at the respective level, up to the age of 15.

This figure shows a positive link between cumulative expenditure per student and PISA reading scores across the countries investing less than USD 50 000 per student. Indeed, a country's mean reading performance increases 25 points for every additional USD 10 000 cumulative expenditures per student invested. Similar results are also observed when analysing PISA science and maths scores: across countries investing less than USD 50 000 per student, an increment of USD 10 000 per student can be expected to bring on an improvement in a country's mean science and maths scores by 30 and 34 points respectively. Above USD 50 000 per student, the relationship between performance and cumulative expenditure per student disappears, suggesting that beyond a minimum threshold, the way funds are allocated may be more relevant than total cumulative expenditure (OECD, 2016).

Figure B1.a. Relationship between cumulative expenditure per student between the age of 6 and 15 and average reading performance in PISA

Concentrating on countries with a cumulative expenditure per student of less than USD 50 000. Cumulative expenditure per student refers to the year 2014 while average reading performance in PISA refers to the year 2015



Note: Cumulative expenditure per student is calculated using the theoretical duration of studies. USD stands for United States dollars.

1. Year of reference 2015.
2. Public institutions only.
3. Year of reference 2013.
4. Total expenditure data include pre-primary education.
5. Year of reference 2012.
6. Combined public and government-dependent private institutions.

Source: OECD/UIS/Eurostat (2017), Table B1.4 (available on line); OECD, PISA 2015 Database, Table I.4.2 and Table II.6.58. See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance- 19991487.htm).

StatLink http://dx.doi.org/10.1787/888933557774

B1

Expenditure per student by educational institutions relative to per capita GDP

Since in most OECD countries access to education is universal (and usually compulsory) at the lower levels of schooling, the quotient between the amount spent per student and the per capita GDP can be indicative of whether the resources spent per student are correlated to the country's ability to pay. At higher levels of education, where student enrolments vary sharply among countries, the link is less clear. At tertiary level, for example, OECD countries may rank relatively high on this measure even when a large proportion of their wealth is spent on educating a relatively small number of students.

In OECD countries, overall expenditure per student by educational institutions from primary to tertiary levels of education averages 27% of per capita GDP, broken down into 22% of per capita GDP at primary level, 25% at lower secondary level, 25% at upper secondary level and 40% at tertiary level (Table B1.4, available on line).

Countries with low levels of expenditure per student may nonetheless invest relatively higher amounts as a share of per capita GDP. For example, although Slovenia's expenditure per student at secondary level and per capita GDP are both below the OECD average, it spends an above-average share of its per capita GDP on each student at secondary level.

The relationship between per capita GDP and expenditure per student by educational institutions is difficult to interpret. However, there is a clear positive relationship between the two at both primary and secondary levels – in other words, less wealthy countries tend to spend less per student than richer ones. Although the relationship is generally positive at these levels, there are variations, even among countries with similar levels of per capita GDP, and especially in those in which per capita GDP exceeds USD 30 000. Australia and Austria, for example, have similar levels of per capita GDP (around USD 48 000 and USD 50 000 respectively) (see Table X2.1 in Annex 2) but allocate very different shares to primary and secondary education. Australia's expenditure at primary level is 17% (below the OECD average of 22%) and is 23% at secondary level (below the OECD average of 25%), while in Austria, the proportions are 23% at primary level and 31% at secondary level (Table B1.5, available on line).

At tertiary level there is more country variation in spending, and in the relationship between countries' relative wealth and their tertiary expenditure levels. Tertiary institutions spending in Brazil, Sweden, the United Kingdom and the United States represents more than 50% of per capita GDP on each student (Table B1.5 available on line). The high share for Sweden, for example, is clearly explained by its extremely high expenditure on R&D, which accounts for over half of total expenditure per student (Table B1.2).

Changes in expenditure per student by educational institutions between 2008 and 2014

Changes in expenditure by educational institutions largely reflect changes in the size of the school-age population and in teachers' salaries, both of which tend to increase over time in real terms. Teachers' salaries, the main component of costs, have increased in the majority of countries during the past decade (see Indicator D3). The size of the school-age population influences both enrolment levels and the amount of resources and organisational effort a country must invest in its education system. The larger this population, the greater the potential demand for education services. Changes in expenditure per student over the years may also vary between levels of education within countries, as both enrolment and expenditure may follow different trends at different levels of education.

Expenditure by primary, secondary and post-secondary non-tertiary educational institutions increased in most countries by an average of 8% between 2008 and 2014, despite the economic crisis (Table B1.3). Over the same period, enrolment at those levels decreased slowly, with a total decline of 2% over the six-year period. Falling enrolment together with increasing expenditure resulted in greater expenditure per student at those levels – 10% higher in 2014 than in 2008. Most countries were spending more in 2014 than they did at the start of the crisis in 2008, with the exception of the United States and some European countries hit hard by the economic turmoil: Estonia, Hungary, Iceland, Italy, Slovenia and Spain. In some countries, this fall in expenditure coincided with policy-making decisions. In Italy, for example, national public expenditure on education decreased following Law 133 of 2008, which allowed, among other measures, for an increase in the pupil-teacher ratio and hence lower educational expenditure. On the other hand, in Israel, Portugal, Turkey and the United Kingdom, expenditure increased significantly between 2008 and 2014, by 76% in Turkey, 36% in Israel, 32% in the United Kingdom and 27% in Portugal.

At tertiary level, expenditure increased much faster than for the lower levels of education, rising on average by 18% between 2008 and 2014. This results, in part, from enrolment growing by a total of 10% between 2008 and 2014. Countries like Brazil and Turkey saw an increase of more than 50% in their total tertiary enrolment over that period. As a result, Turkey almost doubled its expenditure on tertiary education, while expenditure per student expanded by only 60%. Yet, despite these recent advances, Brazil, Chile and Turkey still remain among the countries with the lowest expenditure per student (Table B1.3).

Subnational variation in annual expenditure per student by educational institutions (2014)

Annual expenditure per student is not homogeneous within countries. Among the four countries providing data, large differences are observed across regions within a country in 2014. The Russian Federation is the country with the highest subnational range in terms of annual expenditure per student by educational institution at primary and secondary levels combined with a ratio of almost 9 between the regions with the highest and lowest values and, ranging from USD 27 448 to USD 3 053. Comparatively, regional differences are the smallest in Belgium and Germany (mainly due to a strong fiscal equalization scheme), although the highest value observed for a *Land* in Germany is less than half the highest subnational value observed in Canada and the Russian Federation. In terms of homogeneity in spending at primary and secondary levels within countries, 61 out of 83 regions in the Russian Federation devoted a lower annual expenditure per student than the national average, indicating that the peak values are the benefit of a select minority of regions. This is contrast to Canada and Germany where almost half the regional entities provide a lower level of expenditure than the national average. In Germany, the majority of the *Länder* that spend less than the national average are mainly located in the west side of the country (OECD/NCES, 2017).

Definitions

Ancillary services are services provided by educational institutions that are peripheral to their main educational mission. The main component of ancillary services is student welfare. In primary, secondary and post-secondary non-tertiary education, student welfare services include meals, school health services and transportation to and from school. At the tertiary level, they include residence halls (dormitories), dining halls and healthcare.

Core educational services include all expenditures that are directly related to instruction in educational institutions, including teachers' salaries, construction and maintenance of school buildings, teaching materials, books and administration of schools.

Research and development includes research performed at universities and other tertiary educational institutions, regardless of whether the research is financed from general institutional funds or through separate grants or contracts from public or private sponsors.

Methodology

The indicator shows direct public and private expenditure by educational institutions in relation to the number of full-time equivalent students enrolled. Public subsidies for students' living expenses outside educational institutions have been excluded to ensure international comparability.

Table B1.3 shows the changes in expenditure per student by educational institutions between the financial years 2008, 2011, and 2014. OECD countries were asked to collect 2008 and 2011 data according to the definitions and coverage of UOE 2016 data collection. All expenditure data and GDP information for 2008 and 2011 are adjusted to 2014 prices using the GDP price deflator.

Core educational services are estimated as the residual of all expenditure, that is, total expenditure on educational institutions net of expenditure on R&D and ancillary services. The classification of R&D expenditure is based on data collected from the institutions carrying out R&D, rather than on the sources of funds.

Expenditure per student by educational institutions at a particular level of education is calculated by dividing total expenditure by educational institutions at that level by the corresponding full-time equivalent enrolment. Only educational institutions and programmes for which both enrolment and expenditure data are available are taken into account. Expenditure in national currency is converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP. The PPP conversion factor is used because the market exchange rate is affected by many factors (interest rates, trade policies, expectations of economic growth, etc.) that have little to do with current relative domestic purchasing power in different OECD countries (see Annex 2 for further details).

Expenditure data for students in private educational institutions are not available for certain countries, and some other countries provide incomplete data on independent private institutions. Where this is the case, only expenditure on public and government-dependent private institutions has been taken into account.

Expenditure per student by educational institutions relative to per capita GDP is calculated by expressing expenditure per student by educational institutions in units of national currency as a percentage of per capita GDP, and also in national currency. In cases where the educational expenditure data and the GDP data pertain to different

reference periods, the expenditure data are adjusted to the same reference period as the GDP data, using inflation rates for the OECD country in question (see Annex 2).

Full-time equivalent student: The ranking of OECD countries by annual expenditure on educational services per student is affected by differences in how countries define full-time, part-time and full-time equivalent enrolment. Some OECD countries count every participant at the tertiary level as a full-time student, while others determine a student's intensity of participation by the credits that he/she obtains for successful completion of specific course units during a specified reference period. OECD countries that can accurately account for part-time enrolment have higher apparent expenditure per full-time equivalent student by educational institutions than OECD countries that cannot differentiate among the different types of student attendance.

Data on subnational regions on how much is spent per student are adjusted using national purchasing power of parity (PPPs). Future work on cost of living at subnational level is required to fully adjust expenditure per student used in this section.

Source

Data refer to the financial year 2014 (unless otherwise specified) and are based on the UNESCO, the OECD and Eurostat (UOE) data collection on education statistics administered by the OECD in 2016 (for details see Annex 3 at www.oecd.org/education/education-at-a-glance-19991487.htm). Data from Argentina, China, Colombia, India, Indonesia, Saudi Arabia, South Africa are from the UNESCO Institute of Statistics (UIS).

Data on subnational regions for selected indicators have been released by the OECD, with the support from the US National Centre for Education Statistics (NCES) and are currently available for four countries: Belgium, Canada Germany and the Russian Federation. Subnational estimates were provided by countries using national data sources.

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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OECD/NCES (2017), *Education at a Glance Subnational Supplement*, OECD/National Center for Education Statistics, Paris and Washington, DC, https://nces.ed.gov/surveys/annualreports/oecd/.

Indicator B1 Tables

StatLink http://dx.doi.org/10.1787/888933560130

	Table B1.1	Annual expenditure per student by educational institutions for all services (2014)
	Table B1.2	Annual expenditure per student by educational institutions for core educational services, ancillary services and R&D (2014)
	Table B1.3	Change in expenditure per student by educational institutions for all services, relative to different factors by levels of education (2008, 2011, 2014)
WEB	Table B1.4	Cumulative expenditure per student by educational institutions over the expected duration of primary and secondary studies (2014)
WEB	Table B1.5	Annual expenditure per student by educational institutions for all services, relative to per capita GDP (2014)

Cut-off date for the data: 19 July 2017. Any updates on data can be found on line at http://dx.doi.org/10.1787/eag-data-en. More breakdowns can also be found at http://stats.oecd.org/, Education at a Glance Database.

Table B1.1. Annual expenditure per student by educational institutions for all services (2014)

In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

		Primary	Secondary					Post-secondary non-tertiary	Tertiary (including R&D activities)			All tertiary (excluding R&D activities)	Primary to tertiary education (including R&D activities)
			Lower secondary	Upper secondary			All secondary		Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary		
				General programmes	Vocational programmes	All programmes							
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD	Australia	8 251	11 698	12 397	5 963	10 082	11 023	5 963	9 299	19 772	18 038	11 434	**11 149**
	Austria	11 154	15 106	13 198	16 306	15 079	15 094	4 817	16 275	17 061	16 933	12 528	**14 549**
	Belgium	10 216	12 649	13,571[d]	13,224[d]	13,363[d]	13,118[d]	x(3, 4, 5)	11 901	16 780	16 599	10 747	**12 796**
	Canada[1, 2]	9 256[d]	x(1)	x(5)	x(5)	12 780	12 780	m	14 377	25 185	21 326	15 004	**13 235**
	Chile[3]	4 321	4 737	4 287	4 501	4 349	4 478	a	3 989	8 186	6 952	6 591	**5 135**
	Czech Republic	5 101	8 507	6 661	8 340	7 905	8 191	2 428	17 292	10 504	10 521	6 225	**7 751**
	Denmark[1]	12 158	11 792	x(5)	x(5)	10 526	10 998	a	x(10)	x(10)	16 568	m	**12 785**
	Estonia	6 760	7 272	6 313	7 972	6 900	7 077	8 014	a	12 375	12 375	8 210	**8 389**
	Finland	8 812	13 865	7 978	9 056[d]	8 759[d]	10 387[d]	x(4, 5, 6)	a	17 893	17 893	10 586	**11 381**
	France	7 396	10 309	13 399	14 811	13 927	11 815	9 736	14 122	17 178	16 422	11 310	**11 184**
	Germany	8 546	10 554	11 389	15 861	13 615	11 684	10 646	10 107	17 181	17 180	10 048	**12 063**
	Greece	m	m	m	m	m	m	m	m	m	m	m	**m**
	Hungary	3 789	3 915	8 350	7 076	8 033	6 104	9 855	6 187	8 831	8 688	7 000	**6 126**
	Iceland	11 163	12 359	7 115	12 278	8 631	10 078	12 336	9 388	11 476	11 435	m	**10 782**
	Ireland	8 007	10 518	10 837	a	10 837	10 665	11 359	x(10)	x(10)	14 131	10 525	**10 030**
	Israel	6 833	x(3, 4, 5)	5 880[d]	9 768[d]	6 699[d]	6 699	2 380	4 669	14 924	12 989	8 426	**7 758**
	Italy[1]	8 442	9 033	x(5)	x(5)	8 859	8 927	m	5 771	11 527	11 510	7 114	**9 317**
	Japan	9 062	10 422	x(5)	x(5)	11 047[d]	10 739[d]	x(5, 6, 8, 9, 10)	11 297[d]	19 836[d]	18 022[d]	m	**11 654**
	Korea	9 656	8 932	x(5)	x(5)	11 610	10 316	a	5 432	10 765	9 570	7 681	**9 873**
	Latvia	6 585	6 587	6 581	6 785	6 665	6 629	8 357	9 146	8 931	8 962	7 171	**7 190**
	Luxembourg[1]	21 153	21 499	21 809	22 964	21 682	21 595	1 364	24 855	48 756	46 526	31 364	**24 045**
	Mexico	2 896	2 579	4 280	4 489	4 360	3 219	a	x(10)	x(10)	8 949	7 060	**3 703**
	Netherlands	8 529	12 404	10 326	13 532	12 491	12 446	11 313	11 477	19 188	19 159	11 948	**12 495**
	New Zealand	7 438	9 448	11 013	11 745	11 195	10 267	10 019	10 312	16 219	15 088	12 063	**10 205**
	Norway	13 104	13 975	15 561	16 523	16 047	15 149	15 979	12 813	21 262	20 962	13 059	**15 510**
	Poland[4]	7 026	7 058	5 057	6 673[d]	5 949[d]	6 455[d]	3 950	14 012	9 697	9 708	7 890	**7 374**
	Portugal	6 474	8 634	x(5, 6)	x(5, 6)	9 015[d]	8 821[d]	x(5, 6, 9, 10, 11)	a	11 813[d]	11 813[d]	6 691[d]	**8 516**
	Slovak Republic[1]	6 235	6 308	5 194	7 401	6 618	6 453	7 590	8 118	11 346	11 290	7 542	**7 279**
	Slovenia	9 335	10 432	8 535	7 267	7 716	8 785	a	3 943	13 326	12 067	9 904	**9 698**
	Spain	6 970	8 347	8 153	9 773[d]	8 704[d]	8 528[d]	x(4, 5, 6)	8 784	13 464	12 489	9 144	**8 752**
	Sweden	10 804	11 411	8 224	15 362	11 291	11 342	4 313	6 590	25 554	24 072	10 935	**13 219**
	Switzerland[1]	15 177	19 483	17 873[d]	9 030[d]	11 671[d]	15 022[d]	x(3, 4, 5, 6)	x(3, 4, 5, 6)	27 831	27 831	12 602	**17 436**
	Turkey	3 589	2 953	3 566	3 574	3 570	3 268	a	x(10)	x(10)	8 927	6 931	**4 259**
	United Kingdom	11 367	12 478	12 862	11 539	12 435	12 452	a	x(10)	x(10)	24 542	18 743	**13 906**
	United States	11 319	12 261	x(5)	x(5)	13 776	12 995	15 086	x(10)	x(10)	29 328	26 256	**16 268**
	OECD average	8 733	10 235	9 645	10 454	10 182	10 106	8 184	10 423	16 674	16 143	11 056	**10 759**
	EU22 average	8 803	10 413	9 913	11 408	10 494	10 360	7 211	11 239	16 189	16 164	10 781	**10 897**
Partners	Argentina	3 356	4 663	4 985	a	4 985	4 790	a	x(10)	x(10)	5 085	m	**4 240**
	Brazil[1]	3 799	3 814	x(5)	x(5)	3 870[d]	3 837[d]	a	x(10)	x(10)	11 666	10 552	**5 610**
	China	m	m	m	m	m	m	m	m	m	m	m	**m**
	Colombia[3]	2 490	3 093	x(5)	x(5)	2 976	3 060	a	x(10)	x(10)	5 126	m	**3 245**
	Costa Rica	m	m	m	m	m	m	a	m	m	m	m	**m**
	India	m	m	m	m	m	m	m	a	m	m	m	**m**
	Indonesia[3]	1 476	1 200	1 395	795	1 143	1 175	a	x(10)	x(10)	2 962	2 706	**1 486**
	Lithuania	5 179	5 017	4 839	7 763	5 631	5 205	7 306	a	10 021	10 021	7 237	**6 508**
	Russian Federation	x(3, 4, 5)	x(3, 4, 5)	5 084[d]	3 664[d]	4 939[d]	4 939	x(5)	6 117	9 496	8 808	7 960	**5 928**
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	**m**
	South Africa	m	m	m	m	m	m	m	m	m	m	m	**m**
	G20 average	m	m	m	m	m	m	m	m	m	m	m	**m**

Note: Data on early childhood education are available in Indicator C2. See *Definitions* and *Methodology* sections for more information. Data and more breakdowns available at http://stats.oecd.org/, Education at a Glance Database.

1. Public institutions only (for Italy, for primary and secondary education; for Canada and Luxembourg, for tertiary education and from primary to tertiary; for the Slovak Republic, for bachelor's, master's and doctoral degrees).

2. Primary education includes data from pre-primary and lower secondary education.

3. Year of reference 2015.

4. Vocational programmes in upper secondary education include information from vocational programmes in lower secondary education.

Source: OECD/UIS/Eurostat (2017). See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

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

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Table B1.2. Annual expenditure per student by educational institutions for core educational services, ancillary services and R&D (2014)

In equivalent USD converted using PPPs for GDP, by level of education and type of service, based on full-time equivalents

		Primary, secondary and post-secondary non-tertiary			Tertiary				Primary to tertiary			
		Educational core services	Ancillary services (transport, meals, housing provided by institutions)	Total	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
OECD	Australia	9 189	249	**9 438**	10 701	733	6 603	**18 038**	9 490	345	1 314	**11 149**
	Austria	12 901	606	**13 507**	12 373	155	4 405	**16 933**	12 740	469	1 339	**14 549**
	Belgium	11 581	314	**11 896**	10 360	387	5 852	**16 599**	11 348	328	1 120	**12 796**
	Canada[1, 2]	9 937	503	**10 440**	13 808	1 196	6 323	**21 326**	10 989	662	1 584	**13 235**
	Chile[3]	4 401	0	**4 401**	6 496	96	361	**6 952**	5 004	28	104	**5 135**
	Czech Republic	6 475	432	**6 907**	6 148	77	4 296	**10 521**	6 399	349	1 003	**7 751**
	Denmark[2]	x(3)	x(3)	**11 529**	x(7)	x(7)	x(7)	**16 568**	x(11)	x(11)	x(11)	**12 785**
	Estonia	6 881	110	**6 991**	8 207	3	4 165	**12 375**	7 225	82	1 082	**8 389**
	Finland	8 732	1 047	**9 779**	10 586	0	7 307	**17 893**	9 098	840	1 443	**11 381**
	France	8 671	1 274	**9 944**	10 474	836	5 112	**16 422**	9 016	1 190	979	**11 184**
	Germany	10 486	289	**10 776**	9 252	796	7 131	**17 180**	10 238	391	1 434	**12 063**
	Greece	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	Hungary	5 053	525	**5 578**	6 434	566	1 688	**8 688**	5 296	532	298	**6 126**
	Iceland	x(3)	x(3)	**10 615**	x(7)	x(7)	x(7)	**11 435**	x(11)	x(11)	x(11)	**10 782**
	Ireland	9 203	a	**9 203**	10 525	a	3 606	**14 131**	9 425	a	605	**10 030**
	Israel	6 417	311	**6 728**	8 384	43	4 563	**12 989**	6 740	267	751	**7 758**
	Italy[1]	8 519	407	**8 926**	6 694	420	4 396	**11 510**	8 058	396	864	**9 317**
	Japan[1]	x(3)	x(3)	**9 934**	x(7)	x(7)	x(7)	**18 022**	x(11)	x(11)	x(11)	**11 654**
	Korea	9 129	901	**10 030**	7 594	86	1 890	**9 570**	8 604	622	647	**9 873**
	Latvia	6 484	152	**6 635**	6 998	174	1 790	**8 962**	6 606	157	427	**7 190**
	Luxembourg[2]	19 950	1 247	**21 197**	30 759	606	15 162	**46 526**	21 475	1 347	1 224	**24 045**
	Mexico	x(3)	x(3)	**3 049**	x(7)	x(7)	1 889	**8 949**	x(11)	x(11)	x(11)	**3 703**
	Netherlands	10 739	a	**10 739**	11 948	a	7 211	**19 159**	10 991	a	1 504	**12 495**
	New Zealand	x(3)	x(3)	**9 051**	x(7)	x(7)	3 025	**15 088**	x(11)	x(11)	x(11)	**10 205**
	Norway[1]	14 144	0	**14 144**	12 843	216	7 903	**20 962**	13 883	43	1 584	**15 510**
	Poland[1]	6 476	184	**6 661**	7 654	236	1 818	**9 708**	6 752	196	426	**7 374**
	Portugal[1]	6 956	760	**7 716**	6 002	689	5 122	**11 813**	6 770	746	1 000	**8 516**
	Slovak Republic[2]	5 498	903	**6 401**	5 691	1 851	3 748	**11 290**	5 533	1 073	673	**7 279**
	Slovenia	8 359	674	**9 034**	9 600	304	2 164	**12 067**	8 631	593	474	**9 698**
	Spain	7 164	609	**7 772**	8 578	565	3 345	**12 489**	7 457	600	695	**8 752**
	Sweden	9 802	1 177	**10 979**	10 935	0	13 137	**24 072**	9 996	976	2 248	**13 219**
	Switzerland[2]	15 092	a	**15 092**	12 602	a	15 229	**27 831**	14 634	a	2 802	**17 436**
	Turkey	3 103	272	**3 375**	6 320	611	1 996	**8 927**	3 610	326	323	**4 259**
	United Kingdom	11 626	344	**11 970**	13 868	4 875	5 799	**24 542**	11 971	1 042	893	**13 906**
	United States[1]	11 163	1 013	**12 176**	23 014	3 242	3 072	**29 328**	13 990	1 545	733	**16 268**
	OECD average	8 948	540	**9 489**	10 348	710	5 084	**16 143**	9 189	571	999	**10 759**
	EU22 average	9 105	616	**9 721**	10 123	694	5 346	**16 164**	9 278	630	989	**10 897**
Partners	Argentina	x(3)	x(3)	**4 047**	x(7)	x(7)	x(7)	**5 085**	x(11)	x(11)	x(11)	**4 240**
	Brazil[2]	x(3)	x(3)	**5 113**	x(7)	x(7)	1 114	**11 666**	x(11)	x(11)	84	**5 610**
	China	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	Colombia[3]	x(3)	x(3)	**2 781**	x(7)	x(7)	x(7)	**5 126**	x(11)	x(11)	x(11)	**3 245**
	Costa Rica	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	India	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	Indonesia[3]	1 288	55	**1 344**	2 562	144	257	**2 962**	1 401	63	23	**1 486**
	Lithuania	5 072	225	**5 297**	6 576	661	2 784	**10 021**	5 457	337	713	**6 508**
	Russian Federation	x(3)	x(3)	**4 939**	x(7)	x(7)	848	**8 808**	x(11)	x(11)	x(11)	**5 928**
	Saudi Arabia	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	South Africa	m	m	**m**	m	m	m	**m**	m	m	m	**m**
	G20 average	m	m	**m**	m	m	m	**m**	m	m	m	**m**

Note: See *Definitions* and *Methodology* sections for more information. Data and more breakdowns available at http://stats.oecd.org/, Education at a Glance Database.
1. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
2. Public institutions only (for Italy, for primary and secondary education; for Canada and Luxembourg, for tertiary education and from primary to tertiary; for the Slovak Republic, for bachelor's, master's and doctoral degrees).
3. Year of reference 2015.
Source: OECD/UIS/Eurostat (2017). See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.
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Table B1.3. Change in expenditure per student by educational institutions for all services, relative to different factors by levels of education (2008, 2011, 2014)

Index of change (GDP deflator 2010 = 100, constant prices)

		Primary, secondary and post-secondary non-tertiary									Tertiary								
		Change in expenditure (2010 = 100)			Change in the number of students (2010 = 100)			Change in expenditure per student (2010 = 100)			Change in expenditure (2010 = 100)			Change in the number of students (2010 = 100)			Change in expenditure per student (2010 = 100)		
		2008	2011	2014	2008	2011	2014	2008	2011	2014	2008	2011	2014	2008	2011	2014	2008	2011	2014
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OECD	Australia	83	98	102	98	102	108	84	96	94	88	102	127	86	103	113	102	99	113
	Austria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Belgium	100	101	104	101	100	102	100	101	102	93	102	110	92	103	112	101	98	99
	Canada[1]	92	97	101	101	99	102	91	98	98	89	97	104	99	100	115	89	97	91
	Chile	102	104	109	105	98	94	97	106	115	78	110	121	82	107	122	95	103	99
	Czech Republic	96	103	101	104	98	97	92	105	104	95	117	108	90	101	89	106	116	121
	Denmark[1]	91	92	107	94	105	105	97	88	102	92	102	97	93	93	130	98	110	74
	Estonia	114	93	94	106	98	94	107	95	101	93	114	142	99	100	86	94	113	164
	Finland	96	101	99	101	99	98	95	102	101	93	104	96	99	101	101	94	103	95
	France	99	99	100	100	100	102	98	98	98	96	101	105	97	101	106	99	100	99
	Germany	94	100	98	103	98	94	92	101	105	92	104	109	92	105	123	100	99	89
	Greece	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Hungary[2, 3]	113	94	105	102	99	93	111	95	112	110	117	85[d]	114	107	92	97	109	92
	Iceland	115	103	110	100	100	99	115	103	111	114	97	121	94	103	102	121	94	118
	Ireland	91	96	90	m	101	106	m	96	85	95	94	82	m	100	108	m	94	76
	Israel	92	111	126	96	102	109	96	109	115	92	111	115	87	101	100	106	110	115
	Italy[1]	108	96	98	100	101	101	108	95	97	101	102	97	102	99	93	99	103	104
	Japan[2]	98	100	102	101	99	97	96	101	106	99	104	105[d]	101	100	99[d]	98	104	106
	Korea	82	103	103	105	97	87	78	106	118	92	105	106	101	101	100	92	104	106
	Latvia	130	96	114	109	96	91	119	100	126	128	116	119	112	95	86	114	123	138
	Luxembourg[1]	87	95	98	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Mexico	93	104	112	98	101	104	94	103	108	89	97	118	92	105	119	97	92	99
	Netherlands	93	99	97	100	100	98	93	99	99	92	104	109	93	103	108	99	101	100
	New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Norway	89	95	100	100	101	102	89	94	98	90	97	111	94	103	111	96	94	100
	Poland[2]	95	98	105[d]	107	98	93[d]	89	101	112	77	93	98	102	98	89	76	95	110
	Portugal[1, 2]	89	94	112	101	98	92	88	96	122	94	94	91[d]	95	103	94[d]	99	91	97
	Slovak Republic[1]	86	93	101	107	97	89	80	96	113	97	111	129	100	98	88	97	113	146
	Slovenia	101	98	91	103	99	99	98	99	92	96	104	89	98	98	89	97	106	100
	Spain	97	98	90	97	101	106	100	96	85	94	98	93	95	103	107	99	95	86
	Sweden	101	100	104	106	99	103	95	101	100	90	102	108	91	103	99	99	99	109
	Switzerland[1]	m	m	m	102	99	98	m	m	m	m	m	m	90	106	106	m	m	m
	Turkey[1, 3]	84	118	147	96	110	113	87	108	130	80	195	230	84	116	151	95	168	152
	United Kingdom	91	102	120	99	101	103	92	101	117	m	m	m	96	105	109	m	m	m
	United States	102	98	97	102	101	101	100	97	96	96	104	106	90	104	100	107	100	106
	OECD average	97	99	104	101	100	99	95	99	105	94	107	111	95	102	105	99	105	106
	EU22 average	99	97	102	102	99	98	96	98	103	96	104	104	98	101	101	98	103	103
Partners	Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Brazil[1]	88	104	106	105	97	67	83	106	158	83	113	107	89	120	134	93	94	80
	China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	Lithuania	m	94	90	109	95	86	m	100	105	96	119	120	106	98	97	91	121	124
	Russian Federation[1]	105	104	117	101	101	104	104	103	113	99	93	95	m	94	81	m	99	116
	Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
	G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: See *Definitions* and *Methodology* sections for more information. Data and more breakdowns available at http://stats.oecd.org/, Education at a Glance Database.
1. Public institutions only (for Italy, for primary and secondary education; for Canada and Luxembourg, for tertiary education; for the Russian Federation, for primary, secondary and post-secondary non-tertiary education; for the Slovak Republic, for bachelor's, master's and doctoral degrees).
2. Some levels of education are included with others. Refer to "x" code in Table B1.1 for details.
3. Public expenditure only.

Source: OECD/UIS/Eurostat (2017). See *Source* section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
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