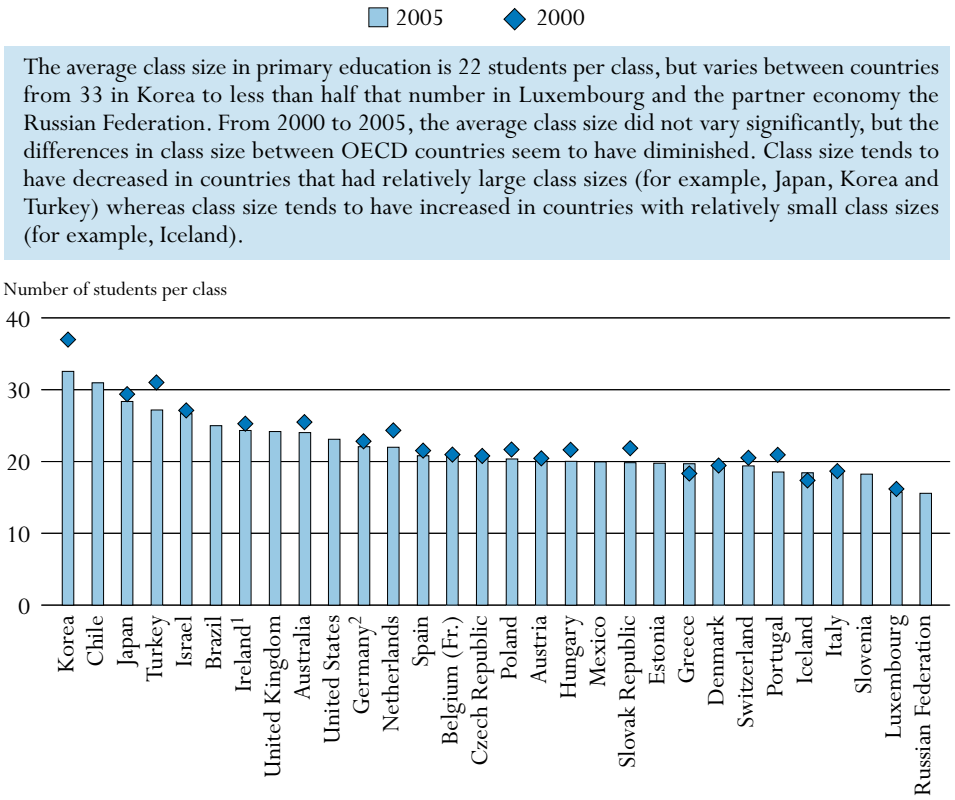
INDICATOR D2

WHAT IS THE STUDENT-TEACHER RATIO AND HOW BIG ARE CLASSES?

This indicator examines the number of students per class at the primary and lower secondary levels, and the ratio of students to teaching staff at all levels; it distinguishes between public and private institutions. Class size and student-teacher ratios are much discussed aspects of the education students receive and – along with the total instruction time of students (see Indicator D1), teachers' average working time (see Indicator D4) and the division of teachers' time between teaching and other duties – are among the determinants of the size of the teaching force within countries.

Key results

Chart D2.1. Average class size in primary education (2000, 2005)



1. Public institutions only.
2. Years of reference 2001 and 2005.

Countries are ranked in descending order of average class size in primary education.

Source: OECD. 2005 data: Table D2.1, present edition. 2000 data: Table D2.1, *Education at a Glance 2002*.
See Annex 3 for notes (*www.oecd.org/edu/eag2007*).

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Other highlights of this indicator

- The average class size in lower secondary education is 24 students per class, but varies from 30 or more in Japan, Korea and Mexico and the partner economies Brazil, Chile and Israel to 20 or less in Denmark, Iceland, Ireland (public institutions), Luxembourg and Switzerland, and the partner economy the Russian Federation.
- The number of students per class increases by an average of nearly three students between primary and lower secondary education, but ratios of students to teaching staff tend to decrease with increasing levels of education due to more annual instruction time, though this pattern is not uniform among countries.
- On average across OECD countries, the availability of teaching resources relative to student numbers in secondary education is more favourable in private institutions than in public institutions. This is most striking in Mexico where, at the secondary level, there are around 14 more students per teacher in public institutions than there are in private institutions. Consistently, at the lower secondary level, there is one student more per class on average across OECD countries in public institutions than in private institutions.

D2

Policy context

Class size, education quality and education systems

Class size is a hotly debated topic and an important aspect of education policy in many OECD countries. Smaller classes are often perceived to allow teachers to focus more on the individual needs of students and reduce the amount of class time teachers spend dealing with disruptions. Smaller class sizes may also influence parents when they choose schools for their children. In this respect, class size would be an indicator of the quality of the school system.

Yet evidence on the effects of variations in class size upon student performance is very mixed. In what has evolved as a contentious area of research that has produced little in the way of consistent results, there is some evidence that smaller classes may have an impact upon specific groups of students (*e.g.* disadvantaged students).

A further reason why there is mixed evidence on the impact of class size may be because there is not sufficient variation in class size to estimate the true effects of this variable on student performance. In addition, policies to group lower performing students into smaller classes in order to devote more attention to them may reduce the observed performance gains that may otherwise be expected from smaller classes. Finally, the fact that the relationship between class size and student performance is often non-linear makes the effects difficult to estimate.

Numerous factors influence the interaction between teachers and students with class size being just one of them. Other influences include the number of classes or students for which a teacher is responsible, the subject taught, the division of the teacher's time between teaching and other duties, the grouping of students within classes and the practice of team-teaching.

The ratio of students to teaching staff is also an important indicator of the resources devoted to education. A smaller ratio of students to teaching staff may have to be weighted against higher salaries for teachers, increased professional development and teacher training, greater investment in teaching technology, or more widespread use of assistant teachers and other paraprofessionals whose salaries are often considerably lower than those of qualified teachers. Moreover, as larger numbers of children with special educational needs are integrated into normal classes, more use of specialised personnel and support services may limit the resources available for reducing the ratio of students to teaching staff.

The ratio of students to teaching staff is obtained by dividing the number of full-time equivalent students at a given level of education by the number of full-time equivalent teachers at that level and in similar types of institutions. However, this ratio does not take into account instruction time compared to the length of a teacher's working day nor how much time teachers spend teaching and therefore it cannot be interpreted in terms of class size (Box D2.1).

Evidence and explanations

Average class size in primary and lower secondary education

At the primary level, the average class size across OECD countries is 22 students per class, but varies widely among countries. It ranges from 33 students per primary class in Korea to fewer than 20 in Denmark, Greece, Iceland, Italy, Luxembourg, Mexico, Portugal, the Slovak Republic and Switzerland and partner economies Estonia, the Russian Federation and Slovenia. At the lower

secondary level, the average class size across OECD countries is 24 students per class and varies from 36 students per class in Korea to fewer than 20 in Denmark, Iceland, Ireland (public institutions), Luxembourg and Switzerland and the partner economy the Russian Federation (Table D2.1).

Box D2.1. Relationship between class size and ratio of students to teaching staff

The number of students per class results from a number of different elements: the ratio of students to teaching staff, the number of classes or students for which a teacher is responsible, the instruction time of students compared to the length of teachers' working days, the proportion of time teachers spend teaching, the grouping of students within classes and team teaching.

For example, in a school of 48 full-time students and 8 full-time teachers, the ratio of students to teaching staff equals 6. If teachers' working week is estimated to be 35 hours including 10 hours teaching, and if instruction time for each student is 40 hours per week, then whatever the grouping of students in this school, average class size can be estimated as follows:

Estimated class size = 6 students per teacher * (40 hours of instruction time per student/ 10 hours of teaching per teacher) = 24 students.

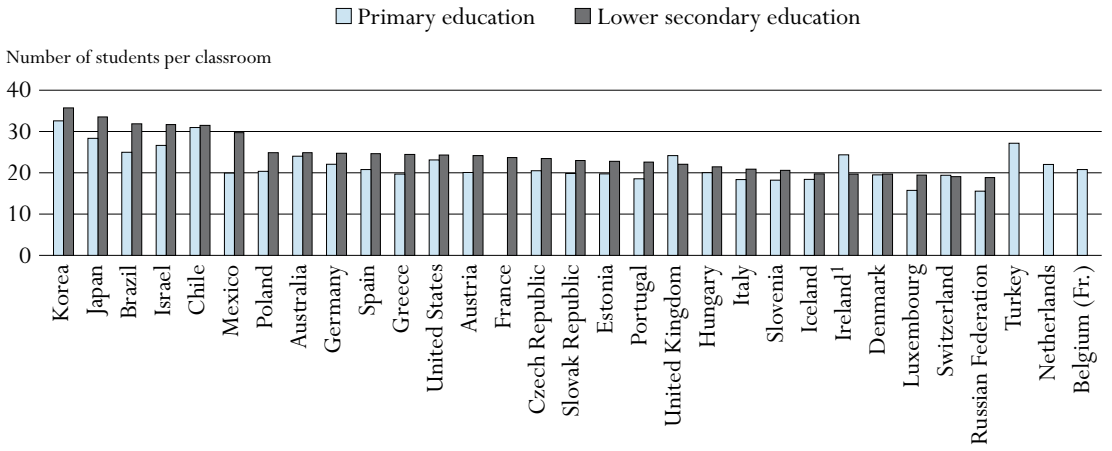
Compared to this estimated figure, class size presented in Table D2.1 is defined as the division of students who are following a common course of study, based on the highest number of common courses (usually compulsory studies), and excludes teaching in sub-groups. Thus, the estimated class size will be close to the average class size of Table D2.1 where teaching in sub-groups is less frequent (as is the case in primary and lower secondary education).

Because of these definitions, similar student-to-teacher ratios between countries can lead to different class sizes. For example, in lower-secondary education, Germany and Greece have very similar average class sizes (24.7 students in Germany and 24.5 students in Greece – see Table D2.1), but the ratio of students to teaching staff differs substantially with 15.5 students per teaching staff member in Germany compared to 7.9 in Greece (see Table D2.2). The explanation for this may lie in the higher number of teaching hours required for teachers in Germany compared to Greece (758 hours in Germany compared to 583 hours in Greece – see Table D4.1).

The number of students per class tends to increase, on average, by nearly three students between primary and lower secondary education. In Austria, Greece, Japan, Mexico, Poland and Portugal, and the partner economies Brazil and Israel, the increase in average class size exceeds four students, while Switzerland and the United Kingdom show a small drop in the number of students per class between these two levels (Chart D2.2). The indicator on class size is limited to primary and lower secondary education because class sizes are difficult to define and compare at higher levels of education, where students often attend several different classes, depending on the subject area.

Between 2000 and 2005, average class size in primary education did not vary significantly (21.5 in 2005 against 22.0 in 2000). However, among countries with comparable data, class size decreased in countries among those with larger class sizes in 2000 (Korea, Japan and Turkey), whereas class size increased (or stayed constant) in countries among those with the lowest class sizes in 2000 (Iceland, Italy and Luxembourg). At secondary level of education, variations in class sizes between 2000 and 2005 follow a similar trend leading to narrowing the range of class sizes (2000 data in *Education at a Glance 2002,* Table D2.1 available on line at: *www.oecd.org/edu/eag2002*).

Chart D2.2. Average class size in educational institutions, by level of education (2005)



1. Public institutions only.
Countries are ranked in descending order of average class size in lower secondary education.
Source: OECD. Table D2.1. See Annex 3 for notes (*www.oecd.org/edu/eag2007*).
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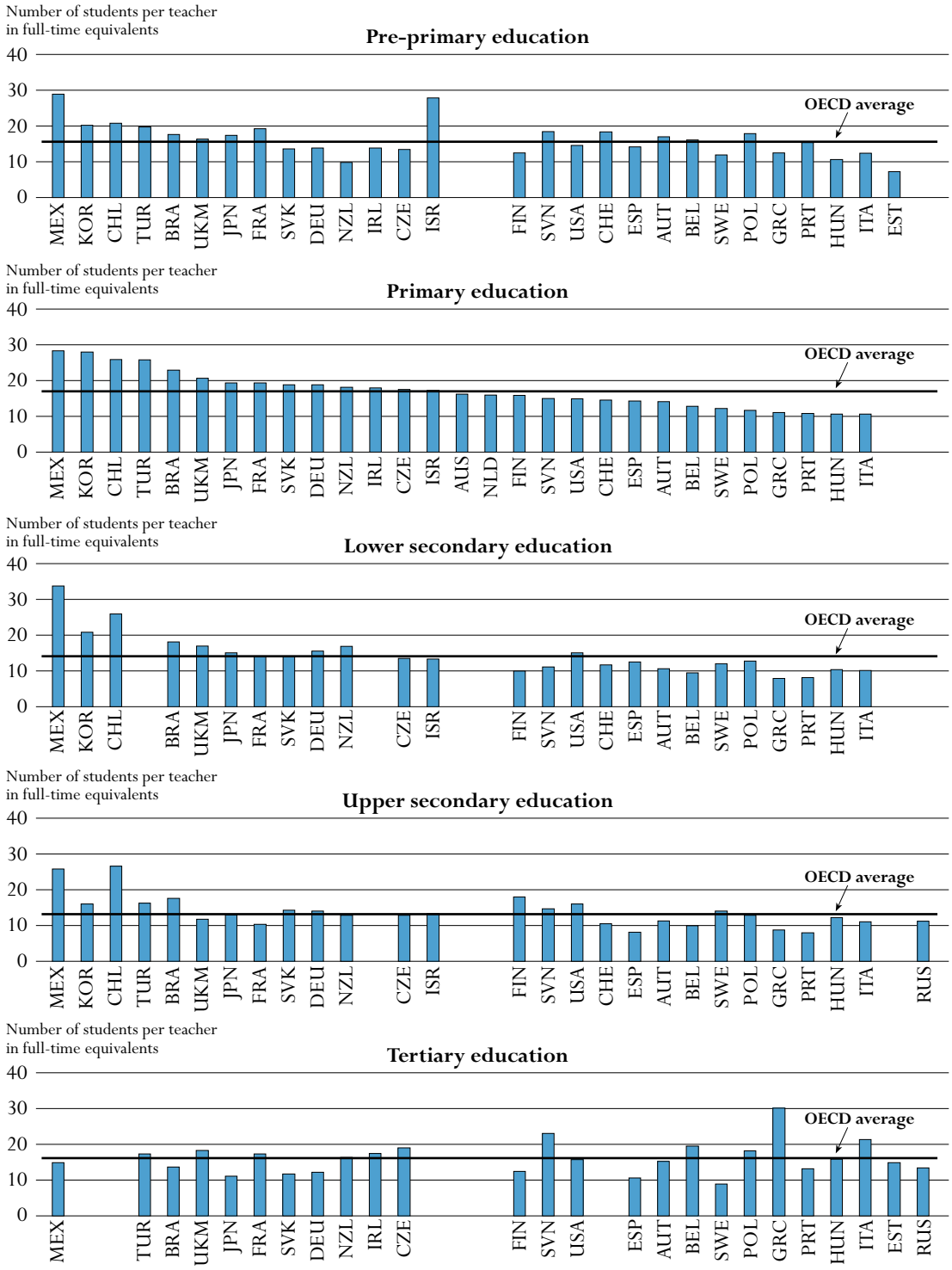
Ratio of students to teaching staff

In primary education, the ratio of students to teaching staff, expressed in full-time equivalents, ranges from equal to or more than 26 students per teacher in Korea, Mexico, Turkey and partner economy Chile to less than 11 in Hungary, Italy and Portugal. The OECD average in primary education is 17 students per teacher (Chart D2.3).

There is similar variation among countries in the ratio of students to teaching staff at the secondary level, ranging from 31 students per full-time equivalent teacher in Mexico to less than 11 in Austria, Belgium, Greece, Italy, Luxembourg, Portugal and Spain. On average among OECD countries, the ratio of students to teaching staff at the secondary level is 13, which is close to the ratios in Australia (12), the Czech Republic (13), Finland (14), France (12), Japan (14), Poland (13), the Slovak Republic (14), Sweden (13) and the United Kingdom (14), and the partner economies Israel (13) and Slovenia (13) (Table D2.2).

As the difference in the mean ratios of students to teaching staff between primary and secondary education indicates, there are fewer full-time equivalent students per full-time equivalent teacher in higher levels of education. The ratio of students to teaching staff decreases between primary and secondary levels of education, despite a tendency for class sizes to increase. This was found to be true in all but seven OECD countries (Hungary, Italy, Mexico, the Netherlands, Poland, Sweden and the United States, and the partner economy Chile).

Chart D2.3. Ratio of students to teaching staff in educational institutions, by level of education (2005)



Note: Please refer to the Reader's Guide for list of country codes and country names used in this chart.
Countries are ranked in descending order of number of students per teacher in primary education.
Source: OECD. Table D2.2. See Annex 3 for notes (*www.oecd.org/edu/eag2007*).

StatLink http://dx.doi.org/10.1787/068464517374

The decrease in the ratio of students to teaching staff from the primary to the secondary level reflects differences in annual instruction time, which tend to increase with the level of education. It may also result from delays in matching the teaching force to demographic changes, or from differences in teaching hours for teachers at different levels. The general trend is consistent among countries, but it is not obvious from an educational perspective why a smaller ratio of students to teaching staff should be more desirable at higher levels of education (Table D2.2).

The ratios of students to teaching staff in pre-primary education are shown in Table D2.2. For the pre-primary level, information is also presented on the ratio of students to contact staff (teachers and teachers' aides). Some countries make extensive use of teachers' aides at the pre-primary level. Eight OECD countries and two partner economies reported smaller ratios of students to contact staff (column 1 of Table D2.2) than students to teaching staff. For countries such as the Slovak Republic, Sweden and the United Kingdom, this difference is not substantial. But in Austria, France, Germany, Japan and the United States as well as in partner economies Chile and Israel and there are larger numbers of teachers' aides. The use of these staff means that student to contact staff ratios are substantially lower than student to teacher ratios particularly in France and partner economy Israel.

At the tertiary level, the ratio of students to teaching staff ranges from 30 students per teacher in Greece to 11 or below in Iceland, Japan, Spain and Sweden (Table D2.2). Such comparisons in tertiary education, however, should be made with caution since it is still difficult to calculate full-time equivalent students and teachers on a comparable basis at this level.

In 12 out of the 15 OECD countries and partner economies with comparable data, the ratio of students to teaching staff is lower in the more occupationally specific tertiary-type B programmes than in tertiary-type A and advanced research programmes (Table D2.2). Hungary, the Slovak Republic and Turkey are the only countries with a higher ratio in tertiary-type B programmes.

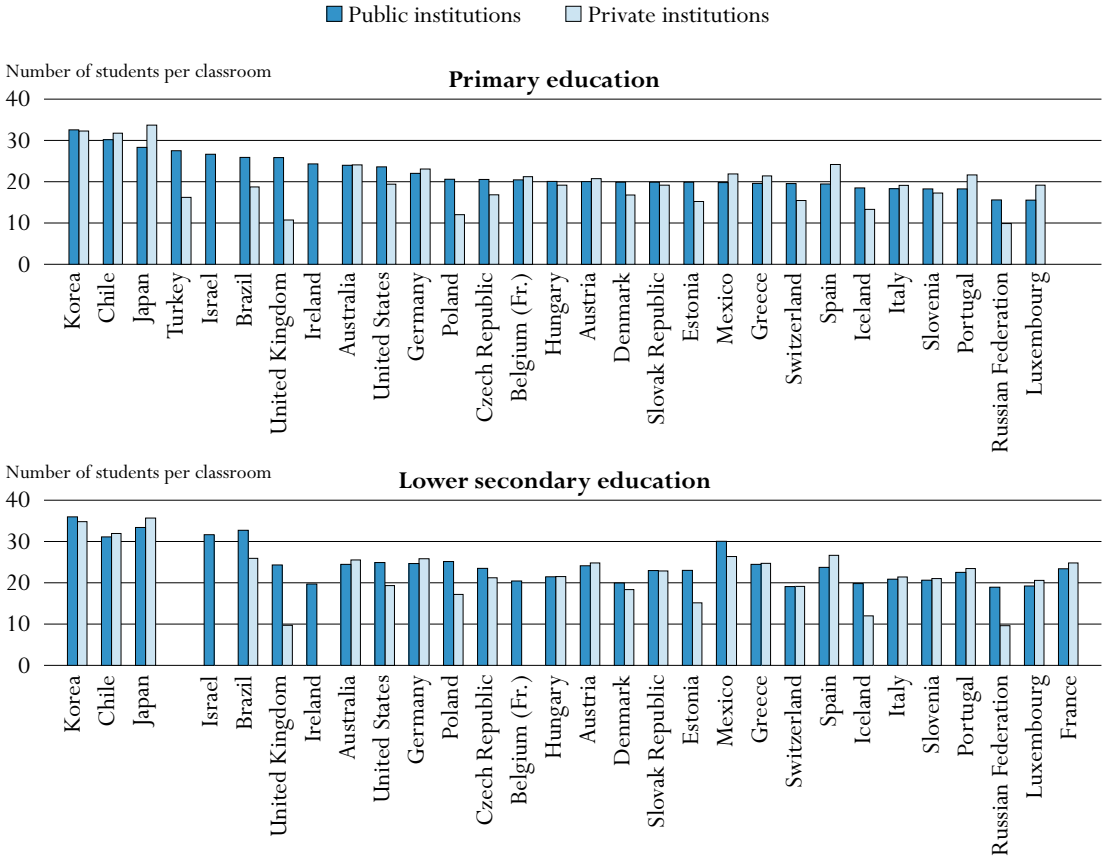
Teaching resources in public and private institutions

Table D2.3 focuses on the secondary level and illustrates the comparative provision of teaching resources between public and private institutions by examining the ratio of students to teaching staff between the two types of providers. On average across the OECD countries (and also in partner economies) for which there are data, there are smaller ratios of students to teaching staff in private institutions at both lower secondary and upper secondary levels, with just over than one more student per teacher in public institutions than in private institutions. The most striking examples of this are Mexico and the United Kingdom where, at the lower secondary level, there are at least 11 more students per teacher in public institutions than in private institutions. The difference in Mexico at the upper secondary level is similarly large. But this is not true in all countries.

Smaller ratios of students to teaching staff in the public sector relative to the private sector are evident in some countries. This is most pronounced in Spain at the lower secondary level where there are some 16 students per teacher in private institutions compared with only 11 students per teacher in public institutions.

In terms of average class size (Chart D2.4 and Table D2.1), on average across the OECD countries for which there are data, average class sizes do not differ between public and private institutions

Chart D2.4. Average class size in public and private institutions by level of education (2005)



Countries are ranked in descending order of number of students per classroom in public institutions in primary education.
Source: OECD. Table D2.1. See Annex 3 for notes (*www.oecd.org/edu/eag2007*).
StatLink http://dx.doi.org/10.1787/068464517374

from more than 1-2 students per class for primary and lower secondary education. However, this trend disguises marked variation between countries. At the primary level, in the Czech Republic, Iceland, Poland, Switzerland, Turkey, the United Kingdom and the United States, and in partner economies Brazil, Estonia and the Russian Federation, for example, average class sizes in public institutions are notably higher – four students or more per class – though in all these countries except partner economy Brazil, the private sector is small (at most 5% of students at the primary level). In contrast, class sizes in private institutions exceed those in public institutions to a similar degree or larger in Japan, Luxembourg and Spain.

The class size comparison between public and private institutions also shows a mixed picture at the lower secondary level, where private education is more prevalent. Lower-secondary average class sizes are larger in private institutions than in public institutions in 11 OECD countries and 2 partner economies, though differences tend to be smaller than is the case in primary education.

There are numerous reasons why countries encourage public and private school sectors. In many countries, a rationale for encouraging growth in both sectors is to facilitate school choice. That is, to broaden the choices available to students and families in their schooling. Considering the

importance of class size in discussions of schooling in many countries, differences in class size between public and private schools and institutions may be a driver of differences in enrolment between these sectors. It is interesting to note that in the OECD countries and partner economies with a substantial private sector in primary and lower secondary education (Australia, Belgium [Fr.], Denmark, Korea, and Luxembourg and the partner economy Chile; see Table C2.9), there are, on average, only marginal differences in class size between public and private institutions. Where large differences do exist, they tend to show private institutions having more students per class than public institutions. This indicates that in countries where a substantial proportion of students and families have decided to choose private education institutions, class size would not be a major determinant of those decisions.

Definitions and methodologies

Data refer to the school year 2004-2005, and are based on the UOE data collection on education statistics that is administered annually by the OECD.

Class sizes have been calculated by dividing the number of students enrolled by the number of classes. In order to ensure comparability among countries, special needs programmes have been excluded. Data include only regular programmes at primary and lower secondary levels of education and exclude teaching in sub-groups outside the regular classroom setting.

The ratio of students to teaching staff has been calculated by dividing the number of full-time equivalent students at a given level of education by the number of full-time equivalent teachers at that level and in the specified type of institution.

The breakdown of the ratio of students to teaching staff by type of institution distinguishes between students and teachers in public institutions and in private institutions (government-dependent private institutions and independent private institutions). In some countries the proportion of students in private institutions is small (see Table C2.9).

Instructional personnel:

- Teaching staff refers to professional personnel directly involved in teaching students. The classification includes classroom teachers; special education teachers; and other teachers who work with a whole class of students in a class, in small groups in a resource room, or in one-to-one teaching situations inside or outside a regular class. Teaching staff also includes department chairpersons whose duties include some teaching, but excludes non-professional personnel who support teachers in providing instruction to students, such as teachers' aides and other paraprofessional personnel.
- Teachers' aides and teaching/research assistants include non-professional personnel or students who support teachers in providing instruction to students.

Table D2.1

Average class size, by type of institution and level of education (2005)

Calculations based on number of students and number of classes

		Primary education					Lower secondary education (general programmes)				
			Private institutions					Private institutions			
		Public institutions	Total private institutions	Government-dependent private institutions	Independent private institutions	TOTAL: Public and private institutions	Public institutions	Total private institutions	Government-dependent private institutions	Independent private institutions	TOTAL: Public and private institutions
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD countries	Australia	24.0	24.1	24.1	a	**24.0**	24.5	25.5	25.5	a	**24.9**
	Austria	20.0	20.7	x(2)	x(2)	**20.1**	24.1	24.8	x(7)	x(7)	**24.2**
	Belgium	m	m	m	m	**m**	m	m	m	m	**m**
	Belgium (Fr.)	20.4	21.2	21.2	a	**20.8**	20.4	m	m	a	**m**
	Canada	m	m	m	m	**m**	m	m	m	m	**m**
	Czech Republic	20.6	16.9	16.9	a	**20.5**	23.5	21.2	21.2	a	**23.4**
	Denmark	19.9	16.8	16.8	a	**19.5**	19.9	18.3	18.3	a	**19.7**
	Finland	m	m	m	a	**m**	m	m	m	a	**m**
	France	m	m	m	m	**m**	23.4	24.8	25.0	13.1	**23.7**
	Germany	22.0	23.1	23.1	x(3)	**22.0**	24.7	25.8	25.8	x(8)	**24.7**
	Greece	19.6	21.4	a	21.4	**19.7**	24.5	24.7	a	24.7	**24.5**
	Hungary	20.1	19.1	19.1	a	**20.0**	21.4	21.5	21.5	a	**21.4**
	Iceland	18.5	13.3	13.3	n	**18.4**	19.8	12.0	12.0	n	**19.7**
	Ireland	24.3	m	a	m	**m**	19.7	m	a	m	**m**
	Italy	18.3	19.1	a	19.1	**18.3**	20.9	21.4	a	21.4	**20.9**
	Japan	28.3	33.7	a	33.7	**28.4**	33.4	35.7	a	35.7	**33.5**
	Korea	32.6	32.3	a	32.3	**32.6**	36.0	34.8	34.8	a	**35.7**
	Luxembourg	15.6	19.2	20.0	19.1	**15.8**	19.2	20.6	20.1	21.3	**19.5**
	Mexico	19.8	21.9	a	21.9	**19.9**	30.0	26.4	a	26.4	**29.7**
	Netherlands	x(5)	x(5)	x(5)	a	**22.0**	m	m	m	a	**m**
	New Zealand	m	m	m	m	**m**	m	m	m	m	**m**
	Norway	a	a	a	a	**a**	a	a	a	a	**a**
	Poland	20.6	12.0	12.1	12.0	**20.4**	25.1	17.2	27.0	15.2	**24.9**
	Portugal	18.2	21.7	24.8	20.7	**18.5**	22.5	23.5	24.2	22.3	**22.6**
	Slovak Republic	19.9	19.2	19.2	n	**19.8**	23.0	22.9	22.9	n	**23.0**
	Spain	19.4	24.2	24.2	23.8	**20.8**	23.8	26.7	27.0	24.1	**24.7**
	Sweden	m	m	m	m	**m**	m	m	m	m	**m**
	Switzerland	19.5	15.4	14.5	15.5	**19.4**	19.1	19.1	21.1	18.7	**19.1**
	Turkey	27.5	16.2	a	16.2	**27.2**	a	a	a	a	**a**
	United Kingdom	25.8	10.7	a	10.7	**24.2**	24.3	9.7	18.4	9.2	**22.1**
	United States	23.6	19.4	a	19.4	**23.1**	24.9	19.3	a	19.3	**24.3**
	OECD average	***21.7***	***20.1***	***19.2***	***20.4***	***21.5***	***23.8***	***22.7***	***23.0***	***21.0***	***24.1***
	EU19 average	***20.3***	***18.9***	***19.7***	***18.1***	***20.2***	***22.5***	***21.6***	***22.9***	***18.9***	***22.8***
Partner economies	Brazil	25.9	18.7	a	18.7	**25.0**	32.7	25.9	a	25.9	**31.9**
	Chile	30.2	31.8	33.5	23.5	**31.0**	31.1	31.9	33.5	24.6	**31.5**
	Estonia	19.9	15.2	a	15.2	**19.7**	23.0	15.1	a	15.1	**22.8**
	Israel	26.6	a	a	a	**26.6**	31.7	a	a	a	**31.7**
	Russian Federation	15.6	9.9	a	9.9	**15.6**	18.9	9.6	a	9.6	**18.8**
	Slovenia	18.2	17.3	17.3	n	**18.2**	20.6	21.0	21.0	n	**20.6**

Source: OECD. See Annex 3 for notes *(www.oecd.org/edu/eag2007).*

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

StatLink http://dx.doi.org/10.1787/068464517374

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Table D2.2

Ratio of students to teaching staff in educational institutions (2005)

By level of education, calculations based on full-time equivalents

		Pre-primary education			Secondary education				Tertiary education		
		Students to contact staff (teachers and teachers aides)	Students to teaching staff	Primary education	Lower secondary education	Upper secondary education	All secondary education	Post-secondary non-tertiary education	Tertiary-type B	Tertiary-type A and advanced research programmes	All tertiary education
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OECD countries	Australia[1, 2]	m	m	16.2	x(6)	x(6)	12.1	m	m	15.0	m
	Austria	14.3	17.0	14.1	10.6	11.3	10.9	10.7	7.5	16.3	15.3
	Belgium	16.1	16.1	12.8	9.4	9.9	9.8	x(5)	x(10)	x(10)	19.6
	Canada	m	m	m	m	m	m	m	m	m	m
	Czech Republic	13.5	13.5	17.5	13.5	12.8	13.2	16.9	16.9	19.2	19.0
	Denmark	m	6.6	x(4)	11.9	m	m	m	m	m	m
	Finland	m	12.5	15.9	10.0	18.0	13.9	x(5)	x(5)	12.5	12.5
	France	13.7	19.3	19.4	14.2	10.3	12.2	m	x(10)	x(10)	17.3
	Germany	10.5	13.9	18.8	15.5	14.0	15.1	16.3	11.6	12.3	12.2
	Greece	12.5	12.5	11.1	7.9	8.8	8.3	7.4	23.2	35.8	30.2
	Hungary	m	10.7	10.6	10.4	12.2	11.2	12.8	24.8	15.5	15.9
	Iceland	m	m	x(4)	11.3	10.8	11.2	x(5, 10)	x(10)	x(10)	11.0
	Ireland	m	13.9	17.9	x(6)	x(6)	15.5	x(6)	x(10)	x(10)	17.4
	Italy	12.4	12.4	10.6	10.1	11.0	10.7	m	8.5	21.7	21.4
	Japan	16.7	17.4	19.4	15.1	13.0	13.9	x(5, 10)	8.5	12.3	11.0
	Korea	20.2	20.2	28.0	20.8	16.0	18.2	a	m	m	m
	Luxembourg[2]	m	m	m	x(6)	x(6)	9.0	m	m	m	m
	Mexico	28.9	28.9	28.3	33.7	25.8	30.6	a	13.7	15.0	14.9
	Netherlands	m	x(3)	15.9	x(6)	x(6)	16.2	x(6)	m	14.3	m
	New Zealand	9.8	9.8	18.1	16.8	12.9	14.8	15.8	13.9	17.2	16.3
	Norway	m	m	m	m	m	m	m	m	m	m
	Poland	m	17.9	11.7	12.7	12.9	12.8	11.0	12.5	18.3	18.2
	Portugal	m	15.4	10.8	8.2	8.0	8.1	m	x(10)	x(10)	13.2
	Slovak Republic	13.5	13.6	18.9	14.1	14.3	14.2	10.9	12.5	11.7	11.7
	Spain	m	14.1	14.3	12.5	8.1	10.6	a	7.0	11.9	10.6
	Sweden	11.7	11.9	12.2	12.0	14.0	13.0	18.5	x(10)	x(10)	8.9
	Switzerland[1, 2]	m	18.3	14.6	11.7	10.5	11.4	m	m	m	m
	Turkey	m	19.7	25.8	a	16.2	16.2	a	52.7	13.6	17.3
	United Kingdom[1, 3]	16.1	16.3	20.7	17.0	11.8	14.1	x(5)	x(10)	x(10)	18.2
	United States	11.9	14.5	14.9	15.1	16.0	15.5	21.5	x(10)	x(10)	15.7
	OECD average	***14.8***	***15.3***	***16.7***	***13.7***	***13.0***	***13.4***	***14.2***	***16.4***	***16.4***	***15.8***
	EU19 average	***13.4***	***14.0***	***14.9***	***11.9***	***11.8***	***12.2***	***13.1***	***13.8***	***17.2***	***16.4***
Partner economies	Brazil	m	17.6	22.9	18.1	17.6	17.9	a	x(10)	x(10)	13.6
	Chile	19.3	20.8	25.9	25.9	26.6	26.3	a	m	m	m
	Estonia	7.3	7.3	m	m	m	m	m	13.3	15.9	14.9
	Israel	12.7	27.8	17.3	13.4	13.4	13.4	m	m	m	m
	Russian Federation[4]	m	m	m	m	11.2	m	x(5)	11.2	14.4	13.4
	Slovenia	9.6	9.6	15.0	11.1	14.6	12.9	x(5)	x(10)	x(10)	23.0

1. Includes only general programmes in upper secondary education.
2. Public institutions only (for Australia, at ISCED level 5A/6 only).
3. The ratio of students to contact staff refers to public institutions only.
4. Excludes general programmes in upper secondary education.

Source: OECD. See Annex 3 for notes *(www.oecd.org/edu/eag2007)*.

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

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Table D2.3

Ratio of students to teaching staff, by type of institution (2005)

By level of education, calculations based on full-time equivalents

		Lower secondary education				Upper secondary education				All secondary education			
			Private				Private				Private		
		Public	Total private institutions	Government-dependent private institutions	Independent private institutions	Public	Total private institutions	Government-dependent private institutions	Independent private institutions	Public	Total private institutions	Government-dependent private institutions	Independent private institutions
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD countries	**Australia**[1]	x(9)	x(10)	x(11)	a	x(9)	x(10)	x(11)	a	12.3	11.9	11.9	a
	Austria	10.5	11.8	x(2)	x(2)	11.0	13.2	x(6)	x(6)	10.7	12.5	x(10)	x(10)
	Belgium[2]	9.1	m	9.7	m	10.3	m	9.7	m	9.9	m	9.7	m
	Canada	m	m	m	m	m	m	m	m	m	m	m	m
	Czech Republic	13.5	11.4	11.4	a	12.6	14.5	14.5	a	13.1	14.0	14.0	a
	Denmark[3]	11.8	12.6	12.6	a	m	m	m	a	m	m	m	a
	Finland[4, 5]	9.9	12.5	12.5	a	17.6	20.6	20.6	a	13.5	18.8	18.8	a
	France	13.9	15.5	x(2)	x(2)	9.6	12.5	x(6)	x(6)	11.7	13.8	x(10)	x(10)
	Germany	15.8	13.0	13.0	x(3)	14.2	12.8	12.8	x(7)	15.3	12.9	12.9	x(11)
	Greece	7.9	7.8	a	7.8	8.9	6.9	a	6.9	8.4	7.3	a	7.3
	Hungary	10.4	10.3	10.3	a	12.3	11.5	11.5	a	11.3	11.1	11.1	a
	Iceland[3]	11.3	10.9	10.9	n	10.7	11.4	11.4	n	11.2	11.3	11.3	n
	Ireland[2]	x(9)	x(10)	a	x(12)	x(9)	x(10)	a	x(12)	15.5	16.3	a	16.3
	Italy	10.3	7.3	a	7.3	11.9	4.4	a	4.4	11.2	5.2	a	5.2
	Japan[4]	15.2	13.2	a	13.2	12.3	14.9	a	14.9	13.7	14.6	a	14.6
	Korea	20.8	20.8	20.8	a	15.3	16.7	16.7	a	18.5	17.8	17.8	a
	Luxembourg	x(9)	m	m	m	x(9)	m	m	m	9.0	m	m	m
	Mexico	35.8	23.8	a	23.8	30.2	16.6	a	16.6	33.8	19.8	a	19.8
	Netherlands	m	m	m	a	m	m	m	a	m	m	m	a
	New Zealand	17.0	15.9	17.1	13.6	13.2	12.0	14.2	7.7	15.2	13.5	15.3	10.0
	Norway	m	m	m	m	m	m	m	m	m	m	m	m
	Poland	12.8	9.8	12.5	9.2	13.1	10.2	16.0	9.7	12.9	10.1	14.3	9.5
	Portugal	8.0	10.2	11.4	8.9	8.5	6.3	9.5	5.6	8.2	7.5	10.5	6.3
	Slovak Republic	14.1	13.2	13.2	n	14.5	13.2	13.2	n	14.3	13.2	13.2	n
	Spain	11.2	16.2	16.4	15.0	7.4	11.5	11.5	11.5	9.5	14.7	15.3	12.5
	Sweden	12.1	11.4	11.4	a	14.0	14.5	14.5	a	13.0	13.0	13.0	a
	Switzerland[6]	11.7	m	m	m	10.5	m	m	m	11.4	m	m	m
	Turkey	a	a	a	a	16.7	7.9	a	7.9	16.7	7.9	a	7.9
	United Kingdom[1]	18.6	7.2	a	7.4	12.5	7.8	9.8	7.7	15.2	7.6	5.9	7.6
	United States	15.7	10.7	a	10.7	16.5	12.2	a	12.2	16.1	11.4	a	11.4
	OECD average	***13.8***	***12.7***	***13.1***	***9.8***	***13.2***	***12.0***	***13.3***	***8.1***	***13.5***	***12.4***	***13.0***	***9.2***
	EU19 average	***11.9***	***11.4***	***12.2***	***9.3***	***11.9***	***11.4***	***13.1***	***7.6***	***11.9***	***11.9***	***12.6***	***9.2***
Partner economies	**Brazil**	19.3	11.2	a	11.2	20.1	10.4	a	10.4	19.6	10.8	a	10.8
	Chile	26.6	25.2	27.4	16.7	27.5	25.8	29.8	13.8	27.1	25.6	29.0	14.6
	Estonia	m	m	a	m	m	m	a	m	m	m	a	m
	Israel	13.4	a	a	a	13.4	a	a	a	13.4	a	a	a
	Russian Federation	m	m	a	m	m	m	a	m	m	m	a	m
	Slovenia[2]	11.1	8.2	8.2	n	13.2	14.9	14.6	27.0	12.2	14.6	14.3	27.0

1. Includes only general programmes in lower and upper secondary education.
2. Upper secondary includes post-secondary non-tertiary education.
3. Lower secondary includes primary education.
4. Upper secondary education includes programmes from post-secondary education.
5. Upper secondary education includes tertiary-type B education.
6. Includes only general programmes in upper secondary education.

Source: OECD. See Annex 3 for notes *(www.oecd.org/edu/eag2007)*.

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

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Reader's Guide

Coverage of the statistics

Although a lack of data still limits the scope of the indicators in many countries, the coverage extends, in principle, to the entire national education system (within the national territory) regardless of the ownership or sponsorship of the institutions concerned and regardless of education delivery mechanisms. With one exception described below, all types of students and all age groups are meant to be included: children (including students with special needs), adults, nationals, foreigners, as well as students in open distance learning, in special education programmes or in educational programmes organised by ministries other than the Ministry of Education, provided the main aim of the programme is the educational development of the individual. However, vocational and technical training in the workplace, with the exception of combined school and work-based programmes that are explicitly deemed to be parts of the education system, is not included in the basic education expenditure and enrolment data.

Educational activities classified as "adult" or "non-regular" are covered, provided that the activities involve studies or have a subject matter content similar to "regular" education studies or that the underlying programmes lead to potential qualifications similar to corresponding regular educational programmes. Courses for adults that are primarily for general interest, personal enrichment, leisure or recreation are excluded.

Calculation of international means

For many indicators an OECD average is presented and for some an OECD total.

The OECD average is calculated as the unweighted mean of the data values of all OECD countries for which data are available or can be estimated. The OECD average therefore refers to an average of data values at the level of the national systems and can be used to answer the question of how an indicator value for a given country compares with the value for a typical or average country. It does not take into account the absolute size of the education system in each country.

The OECD total is calculated as a weighted mean of the data values of all OECD countries for which data are available or can be estimated. It reflects the value for a given indicator when the OECD area is considered as a whole. This approach is taken for the purpose of comparing, for example, expenditure charts for individual countries with those of the entire OECD area for which valid data are available, with this area considered as a single entity.

Note that both the OECD average and the OECD total can be significantly affected by missing data. Given the relatively small number of countries, no statistical methods are used to compensate for this. In cases where a category is not applicable (code "a") in a country or where the data value is negligible (code "n") for the corresponding calculation, the value zero is imputed for the purpose of calculating OECD averages. In cases where both the numerator and the denominator of a ratio are not applicable (code "a") for a certain country, this country is not included in the OECD average.

For financial tables using 1995 data, both the OECD average and OECD total are calculated for countries providing both 1995 and 2004 data. This allows comparison of the OECD average and OECD total over time with no distortion due to the exclusion of certain countries in the different years.

For many indicators an EU19 average is also presented. It is calculated as the unweighted mean of the data values of the 19 OECD countries that are members of the European Union for which data are available or can be estimated. These 19 countries are Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom.

Classification of levels of education

The classification of the levels of education is based on the revised International Standard Classification of Education (ISCED-97). The biggest change between the revised ISCED and the former ISCED (ISCED-76) is the introduction of a multi-dimensional classification framework, allowing for the alignment of the educational content of programmes using multiple classification criteria. ISCED is an instrument for compiling statistics on education internationally and distinguishes among six levels of education. The glossary available at *www.oecd.org/edu/eag2007* describes in detail the ISCED levels of education, and Annex 1 shows corresponding typical graduation ages of the main educational programmes by ISCED level.

Symbols for missing data

Six symbols are employed in the tables and charts to denote missing data:

a Data is not applicable because the category does not apply.

c There are too few observations to provide reliable estimates (*i.e.* there are fewer than 3% of students for this cell or too few schools for valid inferences). However, these statistics were included in the calculation of cross-country averages.

m Data is not available.

n Magnitude is either negligible or zero.

w Data has been withdrawn at the request of the country concerned.

x Data included in another category or column of the table (*e.g.* *x*(2) means that data are included in column 2 of the table).

~ Average is not comparable with other levels of education.

Further resources

The website *www.oecd.org/edu/eag2007* provides a rich source of information on the methods employed for the calculation of the indicators, the interpretation of the indicators in the respective national contexts and the data sources involved. The website also provides access to the data underlying the indicators as well as to a comprehensive glossary for technical terms used in this publication.

Any post-production changes to this publication are listed at *www.oecd.org/edu/eag2007*.

The website *www.pisa.oecd.org* provides information on the OECD Programme for International Student Assessment (PISA), on which many of the indicators in this publication draw.

Education at a Glance uses the OECD's StatLinks service. Below each table and chart in *Education at a Glance 2007* is a url which leads to a corresponding Excel workbook containing the underlying data for the indicator. These urls are stable and will remain unchanged over time. In addition, readers of the *Education at a Glance* e-book will be able to click directly on these links and the workbook will open in a separate window.

Codes used for territorial entities

These codes are used in certain charts. Country or territorial entity names are used in the text. Note that in the text the Flemish Community of Belgium is referred to as "Belgium (Fl.)" and the French Community of Belgium as "Belgium (Fr.)".

AUS	Australia	ITA	Italy
AUT	Austria	JPN	Japan
BEL	Belgium	KOR	Korea
BFL	Belgium (Flemish Community)	LUX	Luxembourg
BFR	Belgium (French Community)	MEX	Mexico
BRA	Brazil	NLD	Netherlands
CAN	Canada	NZL	New Zealand
CHL	Chile	NOR	Norway
CZE	Czech Republic	POL	Poland
DNK	Denmark	PRT	Portugal
ENG	England	RUS	Russian Federation
EST	Estonia	SCO	Scotland
FIN	Finland	SVK	Slovak Republic
FRA	France	SVN	Slovenia
DEU	Germany	ESP	Spain
GRC	Greece	SWE	Sweden
HUN	Hungary	CHE	Switzerland
ISL	Iceland	TUR	Turkey
IRL	Ireland	UKM	United Kingdom
ISR	Israel	USA	United States

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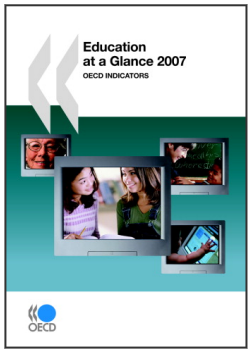

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