2

How school choice can be measured by PISA and how these indicators have evolved over time

This chapter presents several indicators in PISA for measuring school choice. It examines where the proportion of students in private schools has changed between the early 2000s and 2015, and discusses the admissions criteria schools use, notably those related to residence and to academic performance. The chapter also compares the degree of local school competition as perceived by parents and school principals.

A note regarding Israel

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

A note regarding Lithuania

Lithuania became a member of the OECD on 5 July 2018. However, consistent with other publications based on PISA 2015 data, Lithuania is shown as a partner country and is not included in the OECD average.

Most education systems promote some kind of school choice for families. Numerous countries that participated in PISA in 2015 reported that, since 1985, they have introduced reforms aimed to enhance the choice of lower secondary school – either by providing a larger supply of both private and more independent public schools, or by offering financial aid.[1] However, as school choice is a complex concept, and as corresponding policies may take various forms, one cannot isolate one single measure of the prevalence of school choice. One may consider several types of measures. The first is related to the availability of different options for parents. This measure is especially useful in determining the degree of school competition – and thus whether the existence of competitors in their areas may increase pressure on schools to maintain their attractiveness. Using PISA data, this may be approximated by the proportion of students in private schools, and also by the degree of competition between schools (as measured by a question asked of school principals).

The second approach focuses on the extent to which parents are actually able to exercise some form of school choice. Schools may, for example, select students based on socio-economic status or academic ability, and that could exacerbate school segregation, with possible adverse effects on equity. School selectivity also undermines the anticipated positive impact of competition on school quality – as positive outcomes or rankings may be more easily achieved by selecting the brightest students than by improving a school's teaching efficiency. In PISA, school-enrolment practices are proxies for school selectivity. The proportion of schools reporting that they always consider students' records of academic performance (including placement tests) for admission provides a first measure of cream skimming. By contrast, the proportion of schools that always consider a student's home address as a criterion for admission is an indicator that the set of choices (and the quality of schools) depends on where the student lives. The two hotly debated issues related to school choice focus on whether school choice promotes competition between schools (as a way of improving performance) and whether it leads to the sorting of students by ability and social status. How does school choice actually translate into school competition and the allocation of students across schools? How is school choice related to school segregation by socio-economic status and ability?

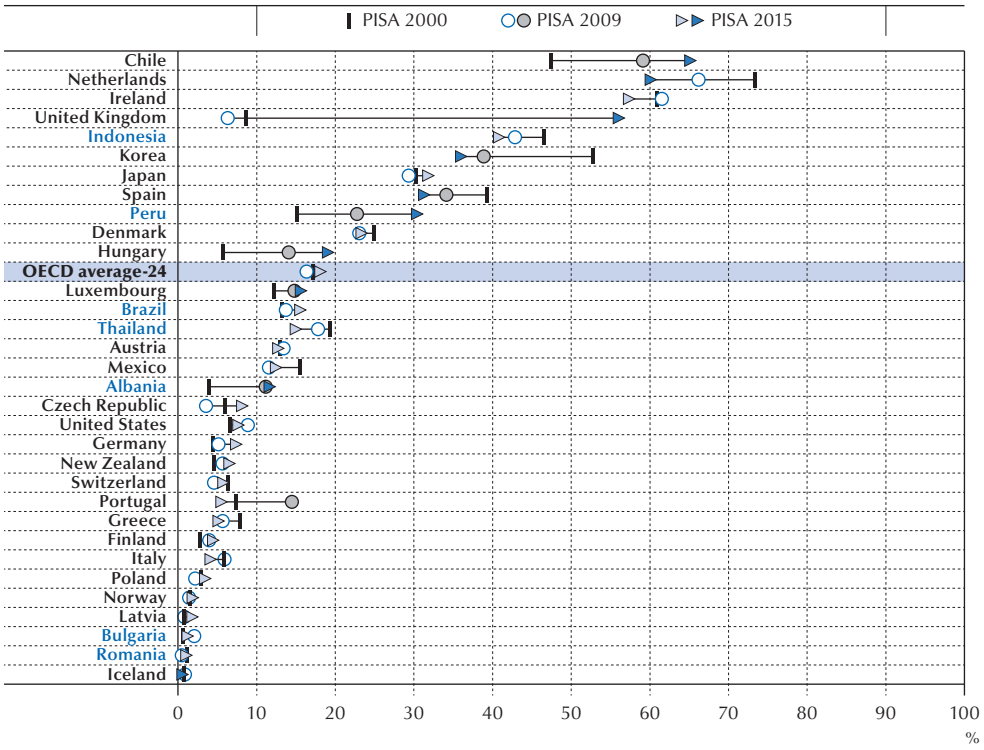
IN MOST PISA-PARTICIPATING COUNTRIES, THE PROPORTION OF STUDENTS IN PRIVATE SCHOOLS DID NOT CHANGE SIGNIFICANTLY BETWEEN 2000 AND 2015

According to PISA data, on average across OECD countries, 18.2% of 15-year-old students were enrolled in a private school in 2015 (see Box 2.1 for the definition of private and public schools in PISA). In many countries (amongst OECD countries, Estonia, Finland, Iceland, Italy, Latvia, Norway, Poland, Slovenia and Turkey), this share is smaller than 5%, but in several countries and economies (Chile, Hong Kong [China], Ireland, Lebanon, Macao [China], the Netherlands, the United Arab Emirates and the United Kingdom) more than half of students were enrolled in a privately managed school that year (Table 2.2).

In most of the countries that have participated in PISA since 2000, this share has not evolved significantly. The United Kingdom is a striking exception. In 2000, less than 10% of 15-year-old students in the United Kingdom were enrolled in a privately managed school; by 2015, 56% were (Figure 2.1). Such a dramatic increase may be related to the adoption of market-oriented policies that provide public funding to independent schools, such as academies or "free schools". In the United Kingdom, academies were first introduced in 2000 through the Learning and Skills Act, which allowed public schools to convert into more autonomous schools (depending on the

type of enrolment), and the Academy Reform of 2010, which widened the academies' remit. While fewer than 150 secondary schools operated as academies in the school year 2008/2009, in the school year 2015/2016, 2 242 schools did.[2]

Figure 2.1 ■ **Change between 2000 and 2015 in the percentage of students enrolled in a private school**



Notes: All analyses are restricted to schools with the modal ISCED level for 15-year-old students.
Public schools are those managed by the local government. Private schools are private independent schools and those funded by government but managed by not-for profit charitable trusts, including academies and free schools.
Only countries with available data in 2000, 2009 and 2015 are shown in the figure.
Statistically significant differences between 2000 and 2009 are shown in dark grey.
Statistically significant differences between 2000 and 2015 are shown in dark blue.
OECD average-24 refers to the arithmetic mean across all OECD countries with available data from 2000 to 2015.
Countries and economies are ranked in descending order of the percentage of students enrolled in private schools in 2015.
Source: OECD, PISA 2000, PISA 2009 and PISA 2015 Databases, Table 2.2.
StatLink https://doi.org/10.1787/888933971404

Apart from the United Kingdom, the proportion of students enrolled in private schools did not change significantly between 2000 and 2015 in two-thirds of the 32 countries with comparable data from 2000, 2009 and 2015 (Figure 2.1). That proportion increased significantly over the period in five other countries (Albania, Chile, Hungary, Luxembourg and Peru), while it decreased in four countries (Iceland, Korea, the Netherlands and Spain). However, actual changes in school choice may not be evident because of differences in the definition of private schools. PISA classifies school type based on the principal's reports. In some instances, the principal may consider a privately managed school public if the funding comes mainly from the government.

For instance, charter schools in the United States are commonly defined as public schools. While the proportion of charter schools increased by more than 50% over the past two decades,[3] the proportion of students enrolled in private schools, as reported by school principals in PISA, appears almost stable. This is another argument for examining the existence of choice amongst public schools, notably by measuring whether families report that several schools compete in the neighbourhood, and by analysing the enrolment practices of schools.

Private schools are not the only choice for parents. In 2009, in 35 out of 46 countries with available data, "there is free choice of other public schools if there were places available"; in 26 of these countries "families were given a general right to enrol in any traditional public school they wish" (Table 2.1).[4]

MORE COMPETITION FOR SCHOOL PRINCIPALS DOES NOT ALWAYS TRANSLATE INTO MORE CHOICE FOR FAMILIES

The general right of families to choose amongst private or different public schools is expected to create, at the local level, more competition between schools. Regulations in and of themselves do not necessarily correspond to the degree of choice – or competition, as perceived by parents on the one hand and school leaders on the other. The reality on the ground may differ from the regulatory environment for a variety of reasons, including the affordability and accessibility of schools.

In some cycles of PISA, context questionnaires contained questions for school principals about local competition amongst schools. In 2012, on average across OECD countries, 77% of students were enrolled in schools whose principal reported that the school competes with at least one other school for enrolment (Figure 2.2).[5] This proportion ranged from 35% in Norway to 99% in Singapore. These variations may be explained by differences in school systems, such as the importance of private schooling or distinct regulations concerning open enrolment. In a country with open enrolment, for instance, schools are expected to compete with all other schools in the area. These variations may also be explained simply by population density. The number of local schools is obviously related to the potential number of students in an area. One should therefore expect to observe more competition between schools in urban areas than in rural areas.

School principals' perceptions may also differ from parents' reports on school choice. School principals usually consider as "competitors" all schools – and all types of schools – that may potentially enrol the students in their area. Parents may consider only the actual options that they have reviewed as affordable or desirable for their child.

In 2012, in some PISA-participating countries and economies, parents' perceptions could be compared with school principals' perceptions. In nine countries (Belgium, Chile, Croatia, Germany, Hungary, Italy, Korea, Mexico and Portugal) and two economies (Hong Kong [China] and Macao [China]) parents of the students who participated in PISA were asked the same question as principals about local competition amongst schools. Parents perceived less local competition amongst schools than school principals did. However, in most cases, the proportion of students in schools where at least half of parents reported that there is at least one competing school in the area was only slightly smaller than the proportion of students in schools whose principals so reported (Figure 2.3).

Table 2.1 ■ Freedom for parents to choose a public school for their children, 2009

OECD	Initial assignment based on geographical area schools	Families are given a general right to enrol in any traditional public school they wish	Choice of other public schools is restricted to the district or municipality	Choice of other public schools is restricted by region	Families must apply to enrol in a public school other than the one assigned to their child(ren)	There is free choice of other public schools if there are places available
Austria	Yes	Yes	No	No	Yes	Yes
Belgium (Fl.)	No	Yes	No	No	No	Yes
Belgium (Fr.)	No	Yes	No	No	No	Yes
Chile	No	Yes	No	No	No	No
Czech Republic	Yes	Yes	No	No	No	Yes
Denmark	Yes	Yes	No	No	Yes	Yes
Estonia	Yes	Yes	No	No	Yes	Yes
Finland	Yes	No	No	No	Yes	No
France	Yes	No	No	No	Yes	Yes
Germany	Yes	No	No	No	Yes	Yes
Greece	Yes	No	No	No	No	No
Hungary	Yes	Yes	No	No	Yes	Yes
Iceland	Yes	No	Yes	Yes	Yes	Yes
Ireland	Yes	Yes	No	No	Yes	Yes
Israel	Yes	Yes	Yes	Yes	No	Yes
Italy	Yes	Yes	No	No	Yes	Yes
Japan	Yes	No	No	Yes	Yes	No
Korea	Yes	No	No	No	No	No
Latvia	Yes	No	Yes	No	No	Yes
Luxembourg	Yes	Yes	No	No	Yes	Yes
Mexico	Yes	Yes	No	No	Yes	Yes
Netherlands	No	No	No	No	No	No
New Zealand	No	Yes	No	No	Yes	Yes
Norway	Yes	No	Yes	Yes	Yes	No
Poland	Yes	No	Yes	Yes	Yes	Yes
Portugal	Yes	Yes	No	No	Yes	Yes
Slovak Republic	Yes	Yes	No	No	No	Yes
Slovenia	Yes	No	No	No	Yes	Yes
Spain	Yes	Yes	No	No	Yes	Yes
Sweden	Yes	No	No	No	No	Yes
Switzerland	Yes	No	Yes	Yes	Yes	No
United States	Yes	m	Yes	Yes	Yes	No
Partners						
Argentina	Yes	Yes	No	Yes	No	Yes
Brazil	Yes	Yes	Yes	Yes	Yes	Yes
Bulgaria	No	Yes	No	No	No	Yes
Colombia	Yes	No	No	No	Yes	Yes
Croatia	Yes	No	Yes	Yes	Yes	Yes
Hong Kong (China)	Yes	Yes	No	No	Yes	Yes
Lithuania	Yes	No	No	No	No	No
Macao (China)	No	Yes	No	No	No	Yes
Montenegro	Yes	Yes	No	No	Yes	Yes
Peru	No	Yes	No	No	No	Yes
Qatar	Yes	No	No	No	Yes	Yes
Singapore	No	Yes	No	No	No	Yes
Chinese Taipei	Yes	No	Yes	Yes	Yes	No
Thailand	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries/ economies with a "Yes"	**37**	**26**	**11**	**12**	**29**	**35**
Total number of countries/economies with available data	**46**	**45**	**46**	**46**	**46**	**46**

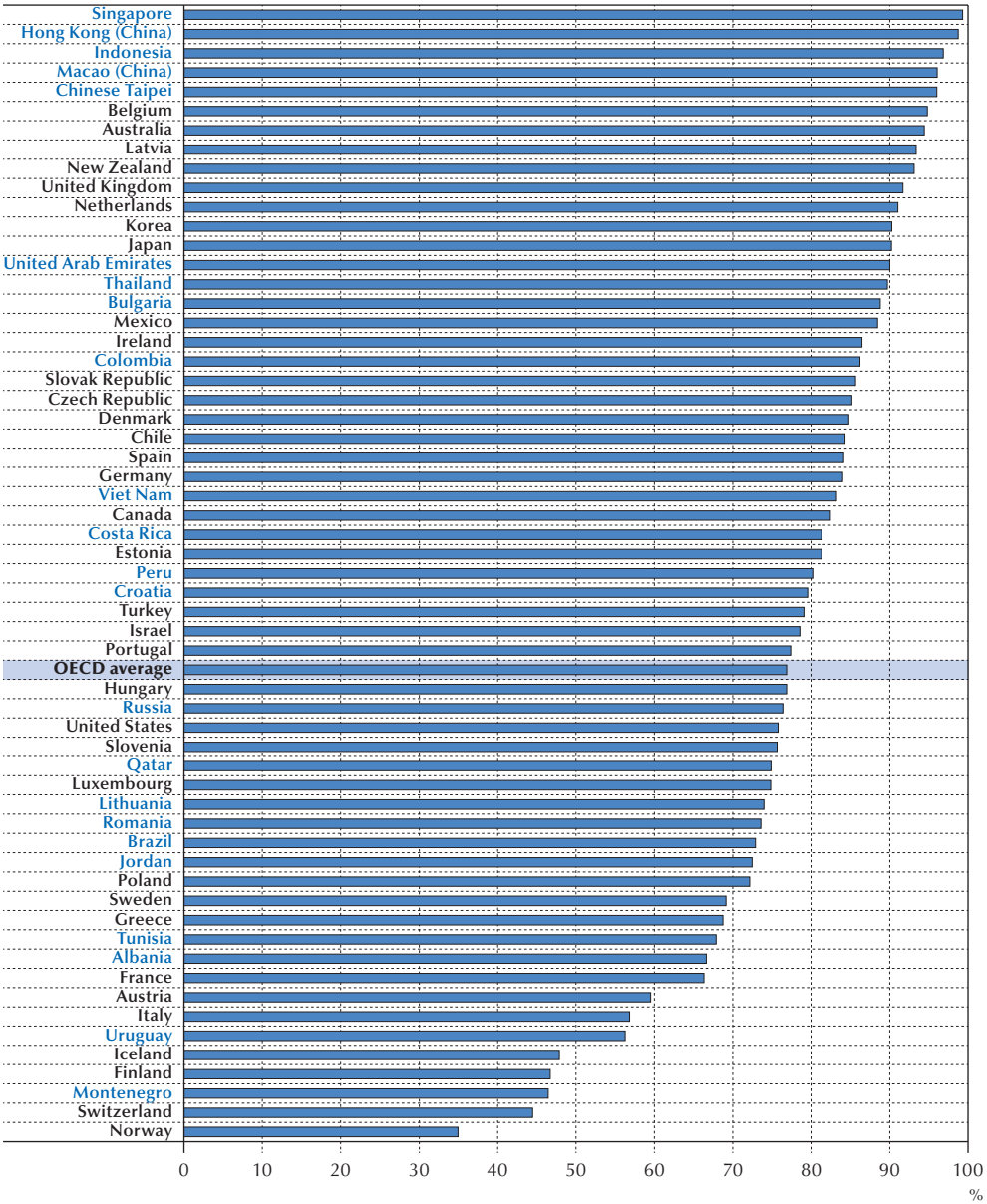
Note: Only countries and economies with available data are included.

Source: OECD (2010), *PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices (Volume IV)*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/9789264091559-en, Table IV.3.7

StatLink https://doi.org/10.1787/888933971803

Figure 2.2 ■ **School competition, 2012**

Percentage of students in schools that compete with at least one other local school; based on school principals' reports

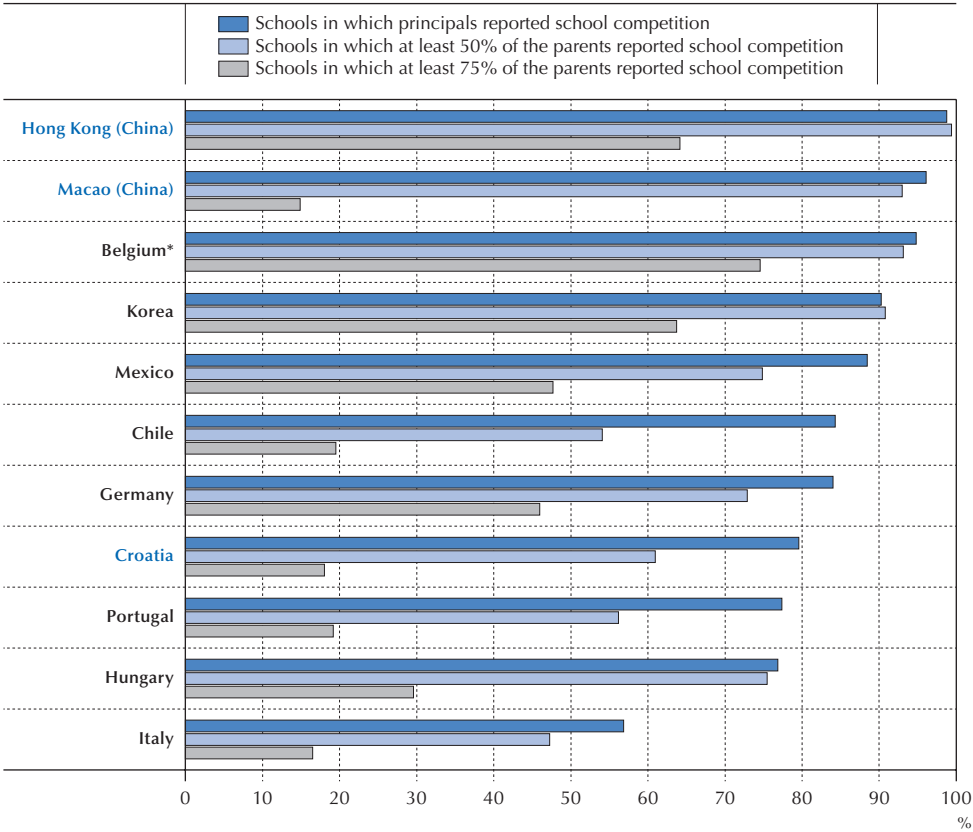


Note: All analyses are restricted to schools with the modal ISCED level for 15-year-old students.
Countries and economies are ranked in descending order of the percentage of students in schools that compete with at least one other local school, according to school principals.
Source: OECD, PISA 2015 Database, Table 2.3.

StatLink https://doi.org/10.1787/888933971423

Figure 2.3 ■ **Percentage of students in schools that compete with at least one other local school, 2012**

Based on school principals' and parents' reports



*Parents' reports for Flemish Community only.
Notes: All analyses are restricted to schools with the modal ISCED level for 15-year-old students.
Only countries and economies with available data are shown.
Countries and economies are ranked in descending order of the percentage of students in schools that compete with at least one other school in the area, according to school principals.
Source: OECD, PISA 2012 Database, Table 2.3.
StatLink https://doi.org/10.1787/888933971442

But in many instances, even though the principal reported that his or her school competes with other schools, at least a quarter of parents whose children attend that school didn't feel that way. The proportion of students in schools where at least 75% of parents reported that the school has at least one local competitor was always much smaller than the proportion of students in schools whose principal reported local competition. For instance, in Chile, Germany and Macao (China), more than 80% of school principals reported that their school competes with at least one other school, while in less than 20% of schools did a majority of parents so report.

These differences in perception suggest that local competition does not always translate into more options for parents. A set of factors may limit those options. For instance, tuition fees may make it

impossible for some families to choose private or independent schools, or a lack of transportation might make access to public schools difficult or impossible. Parents and school principals may also differ in their perception of the size of the "area" to consider.[6] Some parents are likely to consider only schools in close proximity to their home in order to avoid long commutes. In 2015, a majority of parents, and particularly those in disadvantaged families, reported that distance is an important consideration when choosing a school (OECD, 2016[1]).

Moreover, the actual choice may be restricted if all schools do not propose the same curriculum. For instance, in vocational education, some specialities may be proposed only by a limited number of schools because they require specific equipment. When choosing a school, parents may consider the fact that the schools "belong to a certain community or ethnic group", or propose pedagogical approaches that may be more appealing to some families than to others. For instance, some families may be reluctant to enrol their children in a religious school because they themselves are not religious or they practice a different religion.

Students' previous school achievement may also affect the degree of choice. Because of local competition, schools may be tempted to skim off the most affluent or highest-achieving students. Restricting enrolment to the most able students makes it easier for a school to rank high in public evaluations, thus maintaining its attractiveness to parents. Indeed, parents have reported that a good reputation and a safe environment are the main considerations when choosing a school for their child (OECD, 2015[2]). Low-achieving students may have little opportunity to choose schools if schools base their admissions on prior academic performance.

IN MANY PISA-PARTICIPATING COUNTRIES, THE ALLOCATION OF STUDENTS TO SCHOOLS DEPENDED LESS ON RESIDENCE IN 2015 THAN IN 2000, AND SCHOOLS BECAME MORE SELECTIVE OVER THE PERIOD

In almost all school systems, students are assigned to schools based, at least partly, on their home address. Through this policy, students are typically assigned to the school closest to their home. The main objective may be to avoid long and costly commutes to and from school. In 2009, only eight PISA countries and economies reported that students' initial assignment to lower secondary school was not based on geographical location: Belgium, Bulgaria, Chile, Macao (China), the Netherlands, New Zealand, Peru and Singapore (Table 2.1).[7] In other countries and economies, residence-based rules rarely translate into a rigid assignment to one particular local school.

PISA also asked school principals to cite the criteria used for admissions. In 2009, around 40% of students, on average across OECD countries, attended a school whose principal reported that "residence is always considered when students are admitted to [their] school" (Table 2.4a). This proportion was especially large in some countries, though. For instance, it was close to or larger than 75% in Canada, Finland, Norway, Poland, Switzerland, Tunisia and the United States. Lower population density in some areas, or limited access to transportation or schools, may lead to a stronger link between residence and school.

In the majority of countries and economies that participated in PISA in 2000, 2009 and 2015, the proportion of students attending schools that always consider residence for admissions shrank (Figure 2.4). This decline is significant in 11 out of 38 countries and economies. The proportion increased significantly in only five countries: Hungary, Israel, Luxembourg, Poland

and the Russian Federation.[8] The dramatic increase observed in Poland may be explained by the 1999 education reform in that country. This reform extended the period of general education by one year. In 2000, 15-year-old students in Poland were still allocated across various kinds of secondary schools; but in subsequent cycles of PISA, they were enrolled in the same types of lower secondary schools. For those schools, admissions were mainly residence-based.[9] Separate analyses of the students in lower secondary (ISCED 2) and upper secondary (ISCED 3) education suggest that the change affected lower secondary schools more than upper secondary schools (Tables 2.4b and 2.4c) since residence-based admissions had been more widely used in the former. In all countries where 15-year-old students could have been enrolled at either level, in 2000, fewer upper secondary than lower secondary schools based their admissions on residence.

As discussed above, a highly debated issue is whether school choice has resulted in more sorting of students, as highly attractive schools are not always able or willing to increase their intakes to enrol all applicants and may be tempted to select the highest achievers – "cream skim" the best students. Introducing school choice may thus indirectly increase school selectivity in the absence of specific regulations aimed to reduce these sorting effects.

In 2015, on average across OECD countries, around 40% of students were enrolled in schools whose principal reported that "Students' records of academic performance (including placement tests) are always considered when students are admitted to [their] schools" (Table 2.5a). However, the selectivity of schools varied strikingly across countries. In 2015, less than 10% of students in Denmark, Finland, Greece, Norway, Spain and Sweden were enrolled in selective schools; by contrast, at least 90% of students in Croatia, Hong Kong (China), Japan and Thailand were.

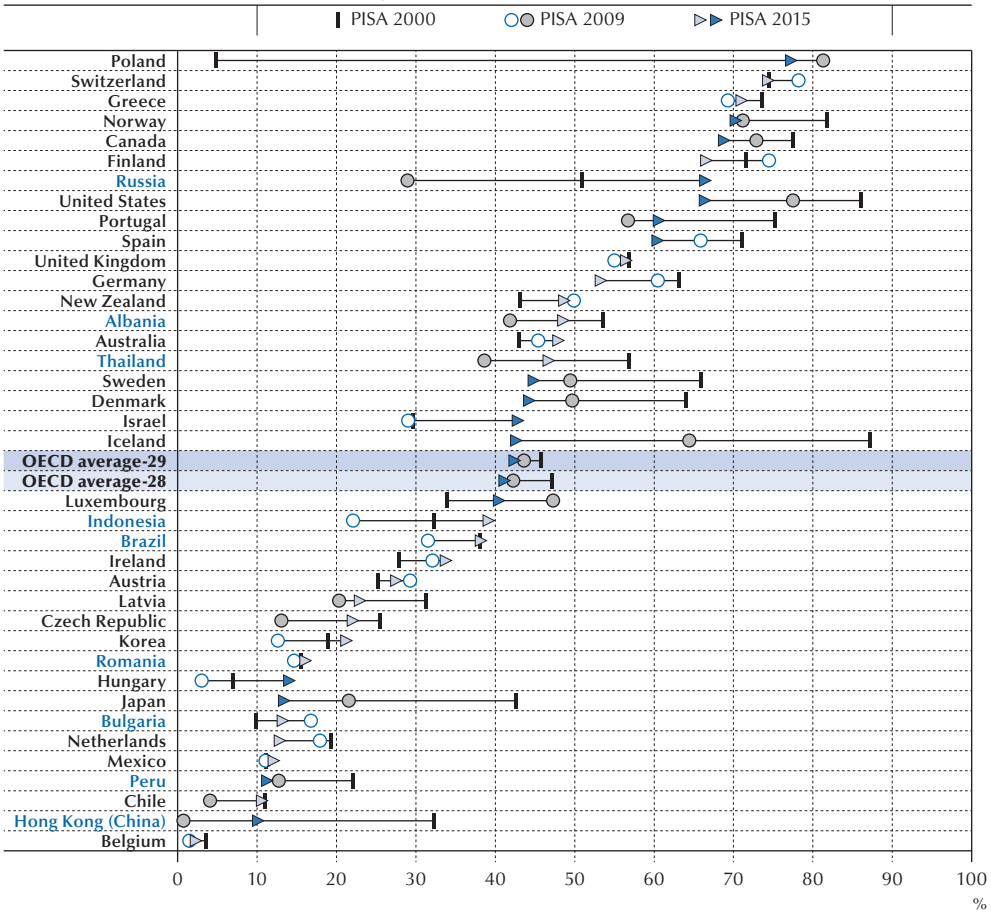
These figures are not necessarily related to school-choice programmes. School selectivity may depend on several factors. Differentiated school systems, where students are streamed into distinct education programmes (some with mostly academic curricula, others mostly vocational), are usually more selective than comprehensive school systems, in which all 15-year-old students follow the same programme. Academic criteria are also expected to be more often considered in upper secondary than in lower secondary schools in systems where these two levels of education are not provided in the same schools (OECD, 2013[3]). As discussed above, as a result of the 1999 education reform, most 15-year-old students in Poland are now enrolled in lower secondary schools with residence-based admissions policies. This is expected to translate into a sharp drop in the proportion of selective schools.

More generally, one may want to analyse changes by looking separately at students in lower secondary (ISCED 2) and upper secondary (ISCED 3) schools.

School principals in many countries reported that, since 2000, prior academic performance has become increasingly important, and residence less important, when considering students for admission to their schools. Across the 37 countries and economies that participated in PISA in both the early 2000s and 2015, the proportion of students in selective schools increased significantly in 15 countries and economies (Brazil, Canada, Denmark, Finland, France, Germany, Hong Kong [China], Luxembourg, Iceland, Ireland, Israel, New Zealand, Portugal, Spain and Thailand) and decreased significantly in 8 countries (Chile, the Czech Republic, Korea, Latvia, the Republic of North Macedonia, Poland, Romania and the Russian Federation) (Table 2.5a).

Figure 2.4 ■ Change between 2000 and 2015 in school admissions based on residence

Percentage of students enrolled in schools in which residence is always considered for admission

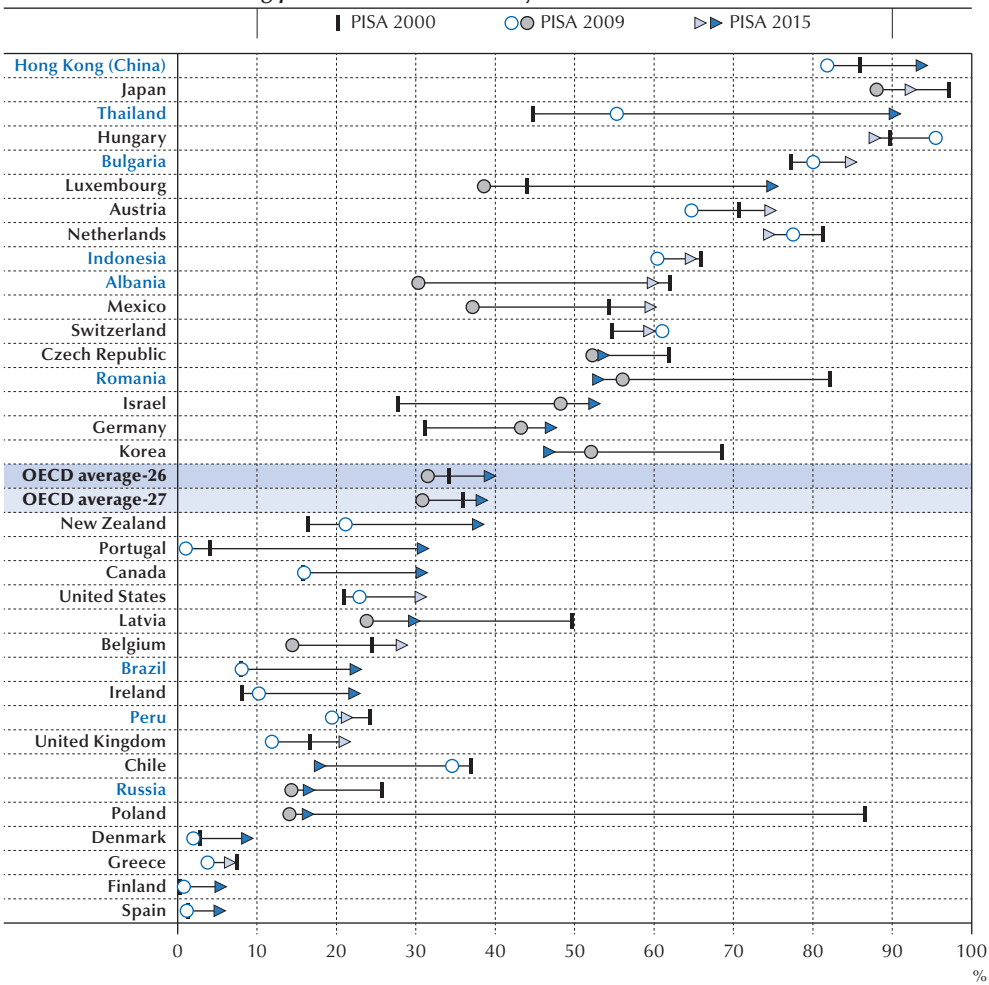


Notes: All analyses are restricted to schools with the modal ISCED level for 15-year-old students.
Only countries with available data in 2000, 2009 and 2015 are shown in the figure.
Statistically significant differences between 2000 and 2009 are shown in dark grey.
Statistically significant differences between 2000 and 2015 are shown in dark blue.
OECD average-29 refers to the arithmetic mean across all OECD countries with available data from 2000 to 2015.
OECD average-28 refers to the arithmetic mean across all OECD countries with available data from 2000 to 2015, except Poland.
Countries and economies are ranked in descending order of the percentage of students enrolled in schools in which residence was always considered for admission in 2015.
Source: OECD, PISA 2000, PISA 2009 and PISA 2015 Databases, Table 2.4a.

StatLink https://doi.org/10.1787/888933971461

Figure 2.5 ■ Change between 2000 and 2015 in school admissions based on academic performance

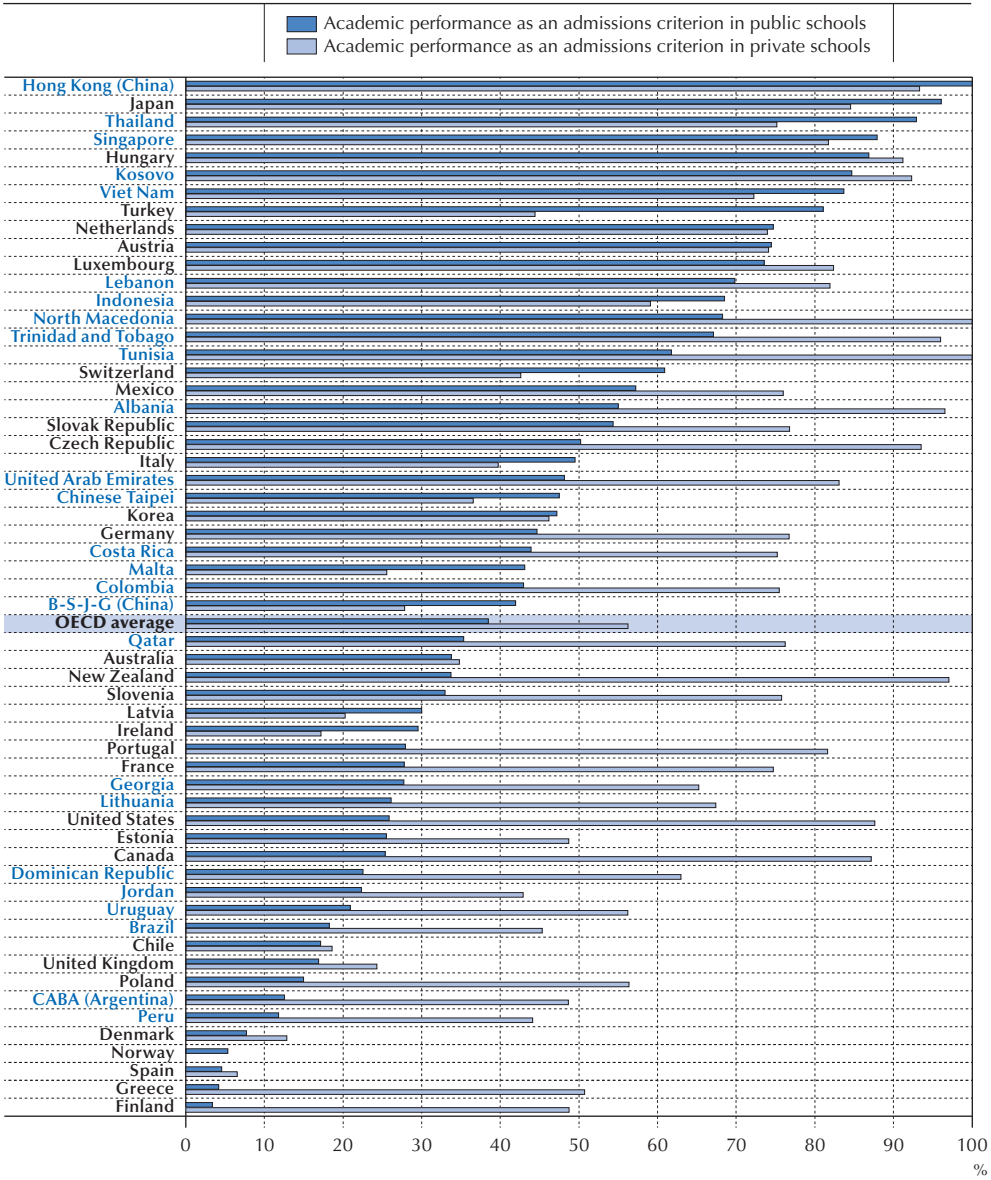
Percentage of students enrolled in schools in which academic performance (including placement tests) is always considered for admission



Notes: All analyses are restricted to schools with the modal ISCED level for 15-year-old students.
Only countries with available data in 2000, 2009 and 2015 are shown in the figure.
Statistically significant differences between 2000 and 2009 are shown in dark grey.
Statistically significant differences between 2000 and 2015 are shown in dark blue.
OECD average-27 refers to the arithmetic mean across all OECD countries with available data from 2000 to 2015.
OECD average-26 refers to the arithmetic mean across all OECD countries with available data from 2000 to 2015, except Poland.
Countries and economies are ranked in descending order of the percentage of students enrolled in schools in which academic performance was always considered for admission in 2015.
Source: OECD, PISA 2000, PISA 2009 and PISA 2015 Databases, Table 2.5a.
StatLink https://doi.org/10.1787/888933971480

Figure 2.6 ■ **School admissions based on academic performance, by school type**

Percentage of students enrolled in schools in which academic performance (including placement tests) is always considered for admission



Notes: All analyses are restricted to schools with the modal ISCED level for 15-year-old students.
Public schools are those managed by the local government. Private schools are private independent schools and those funded by government but managed by not-for profit charitable trusts, including academies and free schools.
Countries and economies are ranked in descending order of the percentage of students enrolled in public schools in which academic performance is always considered for admission.
Source: OECD, PISA 2015 Database, Table 2.6.

StatLink https://doi.org/10.1787/888933971499

The trend towards greater school selectivity was reinforced during the 2010s. When compared to the level that prevailed in 2009,[10] the proportion of school admissions based on academic performance increased significantly in 34 of the 59 countries and economies that participated in PISA in both 2009 and 2015 (Table 2.5a); in 24 of these countries, the increase was more than 10 percentage points. It decreased significantly in only three countries: Chile, by 16 percentage points, Hungary, by 8 percentage points and Malta, by 14 percentage points. The consistent decrease in school selectivity in Chile over the period may be explained by a major reform introduced in 2008 and extended in 2011. The reform aimed to reduce socio-economic segregation across schools by providing financial incentives to schools that enrol disadvantaged students.[11]

When considering students separately, depending on the level of education in which they are enrolled, the trend towards more selectivity is observed between 2009 and 2015 in both lower and upper secondary schools in many countries, except Chile, Hungary and Luxembourg where school selectivity at the upper secondary level has decreased (Tables 2.5b and 2.5c).

In 2015, more private schools (56%) than public schools (39%), on average across OECD countries, based their selection of students on academic criteria (Figure 2.6). However, in nearly one in four countries with available data, public schools were at least as likely as private schools to consider academic performance in their admissions process, or even, as in Ireland, Italy, Japan, Switzerland, Turkey and Thailand, much more likely to be selective than private schools. This reflects the variety of regulatory frameworks, notably for government-dependent private schools (see Box 2.1).

Box 2.1 **Public school, government-dependent and government-independent, privately managed schools**

Public schools, as defined in PISA, are those managed by a public education authority, government agency, or governing board appointed by a government or elected by public franchise. Private schools refer to schools managed directly or indirectly by a non-governmental organisation, such as a church, trade union, business or other private institution. Privately managed schools are classified as government-independent when at least 50% of the funding comes from private sources or as government-dependent when at least 50% of the funding comes from the government (OECD, 2016[1]). As in many countries, the number of students/schools in the private government-dependent or private independent categories is insufficient to be used for the estimates. For this reason, in this analysis, government-dependent and government-independent private schools are analysed jointly.

Government-dependent private schools are usually required to comply with government regulations to a greater extent than independent private schools. Nevertheless, conditions under which private providers are eligible for public funding vary considerably among OECD countries. In some countries, publicly funded private schools do not only enjoy greater pedagogical freedom than their publicly managed counterparts, but also greater autonomy in their admissions and tuition policies. Other systems impose strict eligibility criteria on private schools seeking to qualify for public funding, for instance, obliging them

…

to follow national curricula and assessment procedures, prohibiting for-profit operators, or restricting their ability to charge add-on fees and engage in selective admissions (Boeskens, 2016[4]). In Belgium, for example, subsidised private schools are not permitted to select students on the basis of their academic achievement in order to guarantee parents' right to exercise free school choice (see Box 6.1). In the Netherlands, government-dependent private schools need to comply with the same regulations governing the school admissions and tuition fees as public schools. Other systems use targeted-funding schemes designed exclusively to benefit or provide additional support to disadvantaged students in private schools (Musset, 2012[5]). While it is relatively common for oversubscribed public schools to take into account non-academic factors, such as the proximity of a student's home or the presence of their siblings, in some countries publicly funded private schools are permitted to select students on the basis of academic achievement, aptitude tests and parent interviews. These differential selection practices can restrict the exercise of school choice and risk increasing student segregation across providers.

Source: OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, OECD Reviews of School Resources, OECD Publishing, Paris, https://doi.org/10.1787/9789264276147-en.

Notes

1. This could be either by "creating new autonomous public or government-dependant private schools, to offer new options from which parents can choose", "expanding the opportunities for families to choose a government-dependent private school", "reducing restrictions to school choice among existing public schools" or "including new funding mechanisms that promote school choice". See Table IV.3.7 in *PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices* (OECD, 2010[6]).

2. According to the *Academies Annual Report 2010/11* (UK Government Department of Education, 2012[10]) and the *Academy schools sector in England: consolidated annual report and accounts – year ended 31 August 2016* (UK Government Department of Education, 2017[11]) 133 primary or secondary schools operated as academies in the school year 2008/2009, while in 2002/2003 only 3 did.

3. See https://nces.ed.gov/programs/digest/d17/tables/dt17_216.20.asp?current=yes

4. Based on the system-level questionnaire.

5. This question was not asked in the school questionnaire in PISA 2015.

6. This may specifically depend on the distribution of schools and their degree of dispersion. For instance, depending on their geographical location in the centre or on the contrary at the boundary of cities or school districts, parents and school principals are expected to respectively consider more or less options and perceive more or less intense competitive pressure.

7. This does not mean that the allocation of students in schools does not depend at all on home residence. For instance, in New Zealand, parents must adhere to school-enrolment schemes that are used by some school boards to avoid overcrowding in schools. In state schools, enrolment schemes define a home zone as lying within specific geographic boundaries; establish pre-enrolment procedures for students who live outside of home zones; and identify any special programmes offered by the school and related criteria for student acceptance to these programmes (Education Act 1989, part 2, section 11c). Enrolment schemes for state-integrated schools must comply with the same requirements outlined above, but may prioritise enrolment of students of a particular religious faith to preserve the school's special character.

8. For the Russian Federation, since 2005 preference was given to those who live in proximity of a school (Põder et al., 2016[7]). The observed pattern (a decrease from 2000 to 2009, then an increase from 2009 to 2015) is not consistent, however, except in the case of a delayed application of this rule.

9. For an evaluation of the impact of the reform of the Polish school system on social equity in education, see (Le Donné, 2014[8]).

10. The question was also asked in 2003 and 2006, but the formulation was not exactly identical, making comparisons difficult.

11. In 2008, the Law on Preferential Subsidies (*Subvención Escolar Preferencial, SEP*) provided additional funding to primary schools (extended in 2011 to secondary schools) for the enrolment of socio-economically disadvantaged students. See, for instance, (Santiago et al., 2017[9]) and for an evaluation of the impact of the SEP on segregation (Valenzuela, Allende and Trivelli, 2015[12]). This law was complemented in 2015 by the Inclusion Law,that forbids schools to select students based on social, cultural or academic criteria, and also forbids schools that receive public funding to ask for additional fees from parents. This is unlikely to be observed in the data from PISA 2015, though.

References

Boeskens, L. (2016), "Regulating Publicly Funded Private Schools: A Literature Review on Equity and Effectiveness", *OECD Education Working Papers*, No. 147, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jln6jcg80r4-en. [4]

Le Donné, N. (2014), "La réforme de 1999 du système éducatif polonais Effets sur les inégalités sociales de compétences scolaires", *Revue française de sociologie*, Vol. 55/1, p. 127, http://dx.doi.org/10.3917/rfs.551.0127. [8]

Musset, P. (2012), "School Choice and Equity: Current Policies in OECD Countries and a Literature Review", *OECD Education Working Papers*, No. 66, OECD Publishing, Paris, https://dx.doi.org/10.1787/5k9fq23507vc-en. [5]

OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264267510-en. [1]

OECD (2015), "What do parents look for in their child's school?", *PISA in Focus*, Vol. 51, http://dx.doi.org/10.1787/888932957498. [2]

OECD (2013), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264201156-en. [3]

OECD (2010), *PISA 2009 Results: What Makes a School Successful?: Resources, Policies and Practices (Volume IV)*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264091559-en. [6]

Põder, K. et al. (2016), "Family Background and School Choice in Cities of Russia and Estonia: Selective Agenda of the Soviet Past and Present", *Studies of Transition States and Societies*, Vol. 8/3, http://publications.tlu.ee/index.php/stss/article/view/292 (accessed on 14 December 2018). [7]

Santiago, P. et al. (2017), *OECD Reviews of School Resources: Chile 2017*, OECD Reviews of School Resources, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264285637-en. [9]

UK Government Department of Education (2017), *Academy Schools Sector in England, Consolidated Annual Report and Accounts 2015/16*, http://www.gov.uk/government/publications/academies-consolidated-annual-report-and-accounts-2015-to-2016. [11]

UK Government Department of Education (2012), *Academies Annual Report 2010/11*, http://www.gov.uk/government/publications/academies-annual-report-201011. [10]

Valenzuela, J., C. Allende and G. Trivelli (2015), *El efecto de la SEP en la reducción de la segregación socioeconómica del sistema escolar chileno. Primeros Resultados [The impact of the SEP on the reduction of socio-economic segregation in the Chilean school system]*, Fondo de investigation y Desarrollo en Education, https://centroestudios.mineduc.cl/wp-content/uploads/sites/100/2017/07/F811333-Informe-Final-Valenzuela-UCHILE.pdf (accessed on 17 January 2019). [12]