Reader’s Guide

Data underlying the figures

The data referred to in this report are presented in tables available in some chapters and on line (see list in Annex C).

Three symbols are used to denote missing data:

c  There are too few observations or no observation to provide reliable estimates (i.e. there are fewer than 30 students or fewer than 5 schools with valid data).

m  Data are not available. These data were not submitted by the country or were collected but subsequently removed from the publication for technical reasons.

w  Data have been withdrawn or have not been collected at the request of the country concerned.

Country coverage

This publication features data on 71 countries and economies, including all 36 OECD countries and 35 partner countries and economies.

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.

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.

B-S-J-G (China) refers to the four PISA-participating Chinese provinces of Beijing, Shanghai, Jiangsu and Guangdong.

For the countries below, when results are based on students’ or school principals’ responses:

Argentina: Only data for the adjudicated region of Ciudad Autónoma de Buenos Aires (CABA) are reported in figures and in the text. Results for Argentina are reported in tables only.

Kazakhstan: Results for Kazakhstan are reported in tables only.

Malaysia: Results for Malaysia are reported in tables only.

See Annex A4 of PISA 2015 Results Volume 1 for more information (OECD, 2016).
**International averages**

The OECD average corresponds to the arithmetic mean of the respective country estimates. It was calculated for most indicators presented in this report. For some indicators, data may not be available for all countries, or specific categories may not apply. Readers should, therefore, keep in mind that the term “OECD average” refers to the OECD countries included in the respective comparisons. In cases where data are not available or do not apply to all sub-categories of a given population or indicator, the “OECD average” may be consistent within each column of a table but not necessarily across all columns of a table.

In analyses involving data from multiple years, the OECD average is reported on consistent sets of OECD countries, and several averages may be reported in the same table. For instance, the “OECD average-34” includes only 34 OECD countries that have non-missing values across all the assessments for which this average itself is calculated. This restriction allows for valid comparisons of the OECD average across the same countries over time. As noted previously, consistently with other publications based on PISA 2015 data, Lithuania is shown as a partner country and is not included in the OECD average.

**Rounding figures**

Because of rounding, some figures in tables may not add up exactly to the expected totals. Totals, differences and averages are always calculated on the basis of exact numbers and are rounded only after calculation.

All standard errors in this publication have been rounded to one or two decimal places. Where the value 0.0 or 0.00 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.05 or 0.005, respectively.

**Reporting student data**

The report uses “15-year-olds” as shorthand for the PISA target population. PISA covers students who are aged between 15 years 3 months and 16 years 2 months at the time of assessment and who are enrolled in school and have completed at least 6 years of formal schooling, regardless of the type of institution in which they are enrolled, whether they are in full-time or part-time education, whether they attend academic or vocational programmes, and whether they attend public or private schools or foreign schools within the country.

**Reporting school data**

The principals of the schools in which students were assessed provided information on their schools’ characteristics by completing a school questionnaire. Where responses from school principals are presented in this publication, they are weighted so that they are proportionate to the number of 15-year-olds enrolled in the school.
**Modal ISCED level**

All the analyses presented in this report are restricted to schools with the “modal ISCED level” for 15-year-old students. The “modal ISCED level” is defined here as a level attended by at least one-third of the PISA sample. As PISA students are sampled to represent all 15-year-old students, whatever type of schools they are enrolled in, they may not be representative of their schools. Restricting the sampling to schools with the modal ISCED level for 15-year-old students ensures that the characteristics of students sampled for PISA represent the profile of the typical student attending the school. Details are provided in Table B.3 in Annex B.

**Focusing on statistically significant differences**

This report discusses only statistically significant differences or changes (at the 5% level of significance), unless explicitly stated. These are denoted in darker colours in figures and in bold font in tables.

**Abbreviations used in this report**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dif.</td>
<td>Difference</td>
</tr>
<tr>
<td>% dif.</td>
<td>Percentage-point difference</td>
</tr>
<tr>
<td>Score dif.</td>
<td>Score-point difference</td>
</tr>
<tr>
<td>S.D.</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>S.E.</td>
<td>Standard error</td>
</tr>
<tr>
<td>ESCS</td>
<td>PISA index of economic, social and cultural status</td>
</tr>
<tr>
<td>ISCED</td>
<td>International Standard Classification of Education</td>
</tr>
</tbody>
</table>

**Categorising student performance**

PISA provides an assessment of students’ level of proficiency in science, reading, mathematics and certain innovative domains. For the purpose of the analyses in this report, two different definitions were used:

- **Low achievers** are students who score among the bottom 25% of students within their country or economy on the PISA test.
- **High achievers** are students who score among the top 25% of students within their country or economy on the PISA test.

**Categorising students and schools according to their socio-economic profile**

PISA classifies students into different categories according to their socio-economic status. For the purpose of the analyses in this report, two different definitions were used:

- **Socio-economically disadvantaged students** are those whose values on the PISA index of economic, social and cultural status (ESCS) are amongst the bottom 25% of students within their country or economy.
- **Socio-economically advantaged students** are those whose values on the ESCS are amongst the top 25% of students within their country or economy.
Measuring segregation by ability and socio-economic status across schools

This report uses several measures of school segregation, depending on the focus of the analysis. All of these indicators range from 0 to 1, with 0 corresponding to no segregation and 1 to full segregation (see Annex A for details on the computation of this index).

- The dissimilarity index measures the departure from evenness in the allocation of students of a specific type (a) across schools. It may be interpreted as the proportion of one or the other type that has to be displaced in order to achieve evenness.
- The isolation index measures whether students of type (a) are more concentrated in some schools. The index is related to the likelihood of a representative type (a) student to be enrolled in schools that enrolled students of another type.
- The no-diversity index measures whether the diversity of students observed within schools reflects the diversity of students observed at the country or economy level.

Further documentation

For further information on the PISA assessment instruments and the methods used in PISA, see the PISA 2015 Technical Report (OECD, 2017[2]).

Statlinks

This report uses the OECD StatLinks service. Below each table and chart is a URL leading to a corresponding Excel™ workbook containing the underlying data. These urls are stable and will remain unchanged over time. In addition, readers of the e-books will be able to click directly on these links and the workbook will open in a separate window, if their Internet browser is open and running.

References

