

# Reader's Guide

## Data underlying the figures

The data referred to in this volume are presented in Annex B and, in greater detail, including additional tables, on the PISA website ([www.oecd.org/pisa](http://www.oecd.org/pisa)).

Five symbols are used to denote missing data:

- a The category does not apply in the country or economy concerned; data are therefore missing.
- c There were too few observations to provide reliable estimates (i.e. there were fewer than 30 students or fewer than 5 schools with valid data).
- m Data are not available. There was no observation in the sample; these data were not collected by the country or economy; or these data were collected but subsequently removed from the publication for technical reasons.
- w Results were withdrawn at the request of the country or economy concerned.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).

## Coverage

This publication features data on 79 countries and economies, including all OECD Member countries and more than 40 non-OECD Member countries and economies (see map of PISA countries and economies in “What is PISA?”).

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.

Notes on Cyprus:

- **Note by Turkey:** The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.
- **Note by all the European Union Member States of the OECD and the European Union:** The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

B-S-J-Z (China) refers to the four PISA-participating provinces/municipalities of the People's Republic of China (hereafter “China”): Beijing, Shanghai, Jiangsu and Zhejiang.

Data for Viet Nam are included in most tables in Annex B, but not included in tables, figures and texts that report comparisons of performance with other countries and economies or over time, because full international comparability of results could not be assured at the time this report was published (see Annexes A4 and A6 from Volume I).

## 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.

The OECD total takes the OECD Member countries as a single entity, to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools. It can be used to assess how an OECD Member country compares with the OECD area as a whole.

On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD averages reported in this publication, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.

In this publication, the OECD average is generally used when the focus is on comparing performance across education systems. In the case of some countries, data may not be available for specific indicators, or specific categories may not apply. Readers should,

therefore, keep in mind that the terms “OECD average” and “OECD total” refer to the OECD Member countries included in the respective comparisons. In cases where data are not available or do not apply for all sub-categories of a given population or indicator, the “OECD average” is not necessarily computed on a consistent set of countries across all columns of a table.

In analyses involving data from multiple years, the OECD average is always reported on consistent sets of OECD Member countries, and several averages may be reported in the same table. For instance, the “OECD average-37” refers to the average across all 36 OECD Member countries (and Colombia), and is reported as missing if fewer than 36 OECD Member countries (and Colombia) have comparable data; the “OECD average-30” includes only 30 OECD Member countries that have non-missing values across all the assessments for which this average itself is non-missing. This restriction allows for valid comparisons of the OECD average over time.

The number in the label used in figures and tables indicates the number of countries included in the average:

- **OECD average-37:** Arithmetic mean across all OECD Member countries (and Colombia).
- **OECD average-36a:** Arithmetic mean across all OECD Member countries (and Colombia), excluding Spain.
- **OECD average-36b:** Arithmetic mean across all OECD Member countries (and Colombia), excluding Austria.
- **OECD average-35a:** Arithmetic mean across all OECD Member countries (and Colombia), excluding Austria and Spain.
- **OECD average-35b:** Arithmetic mean across all OECD Member countries (and Colombia), excluding Spain and the United States.

## Rounding figures

Because of rounding, some figures in tables may not add up exactly to the 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, and 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.

## Focusing on statistically significant differences

This volume discusses only statistically significant differences or changes. These are denoted in darker colours in figures and in bold font in tables. Unless otherwise specified, the significance level is set to 5%. See Annex A3 for further information.

## Abbreviations used in this report

<b>ESCS</b>	PISA index of economic, social and cultural status
<b>GDP</b>	Gross domestic product
<b>ICT</b>	Information and communications technology
<b>ISCED</b>	International Standard Classification of Education
<b>ISCO</b>	International Standard Classification of Occupations
<b>PPP</b>	Purchasing power parity
<b>Score dif.</b>	Score-point difference
<b>S.D.</b>	Standard deviation
<b>S.E.</b>	Standard error
<b>STEM</b>	Science, technology, engineering and mathematics
<b>% dif.</b>	Percentage-point difference

## Further documentation

For further information on the PISA assessment instruments and the methods used in PISA, see the *PISA 2018 Technical Report* (OECD, forthcoming<sup>[1]</sup>).

### StatLink

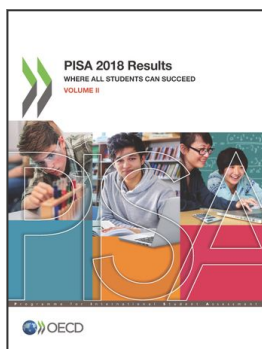
This report has *StatLinks* at the bottom of tables and graphs. To download the matching Excel<sup>®</sup> spreadsheet, just type the link into your Internet browser, starting with the *https://doi.org* prefix, or click on the link from the e-book version.

## Reference

OECD (forthcoming), *PISA 2018 Technical Report*, OECD Publishing, Paris.

[1]





**From:**  
**PISA 2018 Results (Volume II)**  
Where All Students Can Succeed

**Access the complete publication at:**  
<https://doi.org/10.1787/b5fd1b8f-en>

**Please cite this chapter as:**

OECD (2020), "Reader's guide", in *PISA 2018 Results (Volume II): Where All Students Can Succeed*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/b4b97b3b-en>

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