Education at a Glance 2025

OECD Indicators

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Foreword

Governments are increasingly looking to international comparisons of education systems as they develop policies to enhance individuals' social and economic prospects, provide incentives for greater efficiency in schooling, and help to mobilise resources to meet rising demands. The OECD Directorate for Education and Skills contributes to these efforts by developing and analysing quantitative, internationally comparable indicators that it publishes annually in *Education at a Glance*. Together with OECD policy work, these indicators assist governments in building more effective and equitable education systems. Beyond government officials, *Education at a Glance* also aims to support researchers with data for further analysis and help the general public understand how their countries' education systems compare internationally.

Education at a Glance is the product of a long-standing, collaborative effort between OECD governments, the experts and institutions working within the framework of the OECD Indicators of Education Systems (INES) programme, and the OECD Secretariat. It was prepared within the Innovation and Measuring Progress Division of the OECD Directorate for Education and Skills under the responsibility of Edmund Misson. The production of *Education at a Glance 2025* was led by Abel Schumann and contains statistical and analytical contributions from Étienne Albiser, Maria Paula Caldas, Éric Charbonnier, Sophia de Berardinis, Darien Dinaro, Carsten Dolle, Sofía Gómez, Jaione González Yubero, Yanjun Guo, Corinne Heckmann, Viktoria Kis, Qi Kuang, Erika Lee, Bernardo Mayorga, Mara Merca, Alberto Naretto, Simon Normandeau, Maïa Pécaut, Giannina Rech, Gara Rojas González, Özge Özcan Sahin, Giovanni Maria Semeraro, Choyi Whang and Hajar Sabrina Yassine. Administrative support was provided by Ameline Besin and Spencer Matthews. Rachel Linden supported the editorial and production process. The development of the publication was steered by INES member countries through the INES Working Party and facilitated by the INES networks. The members of the various bodies as well as the individual experts who have contributed to this publication and to the INES programme more generally are listed at the end of this publication.

INES member countries and the OECD continue to strive to provide internationally comparable data to meet policy needs. The OECD will develop new indicators where this is feasible and will work to advance in areas where conceptual progress is needed before indicators can be produced. This effort takes place not only within the INES Programme, but also in the OECD Programme for International Student Assessment (PISA), in the Programme for the International Assessment of Adult Competencies (PIAAC), as well as in the OECD Teaching and Learning International Survey (TALIS).

Editorial

The transition to a more digital and knowledge-intensive economy is increasing demand for advanced skills and higher qualifications across the OECD as well as partner countries. This demand will continue to grow as population aging leads to skills shortages.

In response, educational attainment is at an all-time high, with 48% of young adults in OECD countries now completing tertiary education – up from just 27% in 2000. These graduates tend to enjoy higher earnings, more stable employment, better health and greater civic participation.

Although tertiary graduates demonstrate higher skill levels on average, as measured by the OECD Survey of Adult Skills, holding a tertiary qualification does not always equate to strong skills. Across the 29 OECD countries and economies covered, 13% of tertiary-educated adults failed to reach even the baseline literacy proficiency level in 2023, meaning they could understand only short texts on familiar topics. This illustrates the need for countries to both expand tertiary access, and raise the quality and relevance of the education provided.

Low tertiary completion rates are another challenge that undermine the return on public investment, deepen skills shortages and limit access to opportunities. Across 32 OECD and partner countries, only 43% of bachelor's students graduate on time, rising to just 70% within three additional years, with relatively lower rates among men (63% compared to 75% for women). Policy interventions to improve completion rates can include strengthening academic preparation and career guidance in secondary education, as well as designing tertiary programmes with clearly defined course sequences and support measures for those at risk of falling behind.

More inclusive and flexible tertiary educational options are also needed. These should include tailored programmes for vocational students, admissions processes that better recognise diverse learner profiles, and shorter, targeted offerings such as microcredentials.

The impact of family educational background on tertiary attainment has remained persistent over the past decade. In 2012, just 23% of young adults whose parents had not completed upper secondary education attained a tertiary degree, compared to 65% of those with at least one tertiary-educated parent. This gap remained significant in 2023: only 26% of young adults from families with lower educational attainment had completed tertiary education, compared to around 70% from highly educated households.

Some countries show that this dynamic can be reversed. Denmark, England and Belgium's Flemish Community have managed to shrink the divide in achieving tertiary education through targeted interventions.[1]

In primary and secondary education, socio-economic status also continues to play a significant role in academic achievement - accounting for 20% or more of the variation in maths scores in some countries, according to PISA data. To prevent these disparities from deepening, disadvantaged students and schools require further support. Persistent teacher shortages disproportionately affect disadvantaged learners and should also be addressed.

[1] The magnitude of this change is subject to larger statistical uncertainty than other estimates in the report due to small sample sizes.

The OECD recommends a comprehensive approach to ensuring equality of opportunity across all levels of education, as we increase both enrolment and quality to meet pressing skills needs. This begins with strong early childhood education systems, which are associated with better academic performance, and better outcomes for people, our societies and our economies.

Mathias Cormann,
OECD Secretary-General

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Reader's guide

The structure and content of *Education at a Glance*

Education at a Glance is structured into four parts.

Part A *The output of educational institutions and the impact of learning*, contains indicators on the output, outcomes and impact of education in the form of the overall attainment of the population, as well as the learning, economic and social outcomes. Through this analysis, the indicators in this chapter provide context, for example, to shape policies on lifelong learning. They also provide insights into the policy levers needed to address areas where outcomes and impact may not be aligned with national strategic objectives.

Part B *Access to education, participation and progression*, considers the full education system from early childhood to tertiary education and provides indicators on the enrolment, progression and completion of students at each level of education. These indicators can be considered a mixture of output and outcome, to the extent that the output of each education level serves as input to the next and that progression is the result of policies and practices at classroom, institution and system levels. But they can also provide context to identify areas where policy intervention is necessary to address issues of inequity, for example, or to encourage international mobility.

Part C *Financial resources invested in education*, provides indicators on expenditure in education and educational institutions, how that expenditure is shared between public and private sources, the tuition fees charged by institutions, and the financial mechanisms to support students. These indicators are mainly policy levers, but they also help to explain specific learning outcomes. For example, expenditure on educational institutions per student is a key policy measure that most directly affects individual learners, but it also acts as a constraint on the learning environment in schools and learning conditions in the classroom.

Part D *Teachers, the learning environment and organisation of schools*, provides indicators on instruction time, teachers' and school heads' working time, and teachers' and school heads' salaries. These indicators not only represent policy levers that can be adjusted, but also provide context for the quality of instruction and for the outcomes of individual learners. This part also presents data on the profile of teachers.

In addition to the regular indicators and core statistics published, *Education at a Glance* also contains analytical work in textboxes. This work usually provides research elements that contribute to the understanding of the indicator, or additional analysis of a smaller number of countries that complement the findings presented. Furthermore, the 2025 edition contains a special chapter with results from the OECD Survey of Adult Skills (PIAAC).

Sustainable Development Goal 4

In September 2015, world leaders gathered to set ambitious goals for the future of the global community. Goal 4 of the Sustainable Development Goals (SDGs) seeks to ensure "inclusive and equitable quality education and promote lifelong learning opportunities for all". Each target of the SDG 4 framework has at least one global indicator and a number of related thematic indicators designed to complement the analysis and the measurement of the target.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) oversees the education SDG agenda in the context of the United Nations-led SDG framework. As the custodian agency for most of the SDG 4 indicators, the UNESCO Institute of Statistics (UIS) is co-ordinating global efforts to develop the indicator framework to monitor progress towards SDG 4 targets. In addition to collecting data, the UIS works with partners to develop new indicators, statistical approaches and monitoring tools to better assess progress across the education-related SDG targets.

In this context, the OECD's education statistics have a key role to play in the achievement of – and measuring progress towards – SDG 4 and its targets. There is a high level of complementarity between the SDG 4 agenda and the data collected and analysed by the OECD. The OECD is working with the UIS, the SDG 4 Steering Committee and the technical working groups that have been put in place to help build a comprehensive data system for global reporting, agree on the data sources and formulae used for reporting on the SDG 4 global indicators, and on selected thematic indicators for OECD and partner countries.

Statistical coverage

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 who owns or sponsors the institutions concerned and regardless of how education is delivered. With one exception (described below), all types of students and all age groups are included: children (including students with special needs), adults, nationals, foreigners and students in distance learning, in special education programmes or in education programmes organised by ministries other than the ministry of education, provided that the main aim of the programme is to broaden or deepen an individual's knowledge. Vocational and technical training in the workplace is not included in the basic education expenditure and enrolment data, with the exception of combined school- and work-based programmes that are explicitly deemed to be part of the education system.

Educational activities classified as "adult" or "non-regular" are covered, provided that the activities involve the same or similar content as "regular" education studies, or that the programmes of which they are a part lead to qualifications similar to those awarded in regular education programmes. Courses for adults that are primarily for general interest, personal enrichment, leisure or recreation are excluded.

More information on the coverage of the indicators presented in *Education at a Glance* can be found in the *OECD Handbook for Internationally Comparable Statistics on Education 2018* (OECD, 2018[1]).

Comparability over time

The indicators in *Education at a Glance* are the result of a continuous process of methodological improvement aimed at improving the robustness and international comparability of the indicators. As a result, data across different editions of *Education at a Glance* may not be comparable. To analyse time trends, it is preferable to use the data for different time periods from the latest edition of *Education at a Glance* or the data available online. All comparisons over time presented in this report and on the *Education at a Glance Database* (https://data-explorer.oecd.org/) are based on annual revisions of historical data and the methodological improvements which have been implemented in this edition.

Country coverage

This publication features data on education from all OECD countries and Brazil, a partner country that participates in the INES programme, as well as other G20 and OECD accession countries that are not INES members (Argentina, Bulgaria, Croatia, the People's Republic of China, India, Indonesia, Peru, Romania, Saudi Arabia and South Africa). Data sources for the non-INES participating countries come from the regular INES data collections or from other international or national sources.

Note on terminology: “partner countries” and “economies”

Education at a Glance reports data on non-OECD countries. In particular, data on Brazil, which is a member of the Indicators of Educational System (INES) programme, are reported throughout the publication. Data on other G20 countries are reported when available. These countries are referred to as “partner countries”.

In some instances, data on some subnational entities, such as England (United Kingdom), are included in country-level data. In line with the agreed upon OECD terminology, these subnational entities are referred to as “economies” throughout the publication. The Flemish Community of Belgium and the French Community of Belgium are abbreviated in the tables and figures as “Flemish Comm. (Belgium)” and “French Comm. (Belgium)”.

Calculation of international means

For many indicators, an OECD average is presented; for some, an OECD total is shown. 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.

If data from subnational entities are reported for some countries in an indicator, the subnational data are included in the calculation of the OECD average. If data from only one subnational region of a country are available, the data point will be used in the calculation of the OECD average as if the subnational region represents the entire country. If data for more than one subnational region from a country are reported in an indicator, the unweighted average of all subnational regions from the country is calculated. This unweighted average is then treated as the corresponding country value for the calculation of the OECD average.

The OECD total is calculated as the 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 OECD countries are considered as a whole. This approach is taken for the purpose of comparing, for example, expenditure charts for individual countries with those of all of the OECD countries for which valid data are available, considered as a single entity.

For tables using time series, the OECD average is calculated for countries providing data for all reference years used. This allows the OECD average to be compared over time with no distortion due to the exclusion of some countries in the different years.

For many indicators, an EU25 average is also presented. It is calculated as the unweighted mean of the data values of the 25 countries that are members or accession countries of both the European Union and the OECD for which data are available or can be estimated. The 25 countries are Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Romania, the Slovak Republic, Slovenia, Spain and Sweden.

The EU25 total is calculated as the weighted mean of the data values of all OECD-EU countries for which data are available or can be estimated. It reflects the value for a given indicator when the OECD-EU area is considered as a single entity.

For some indicators, a G20 average is presented. The G20 average is calculated as the unweighted mean of the data values of all G20 countries for which data are available or can be estimated (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, the Russian Federation, Saudi Arabia, South Africa, the Republic of Türkiye, the United Kingdom and the United States; the European Union is the 20th member of the G20 but is not included in the calculation). The G20 average is not computed if data for both China and India are not available.

OECD, EU25 and G20 averages and totals can be significantly affected by missing data. In the case of some countries, data may not be available for specific indicators, or specific categories may not apply. Therefore, readers should keep in mind that the term “OECD/EU25/G20 average” refers to the OECD, EU25 or G20 countries included in the respective comparisons. OECD, EU25 and G20 averages are not calculated if more than 40% of countries have missing information or have information included in other columns. In this case, a regular average is presented, which corresponds to the arithmetic mean of the estimates included in the table or figure.

Classification of levels of education

The classification of levels of education is based on the International Standard Classification of Education (ISCED), an instrument for compiling statistics on education internationally. ISCED 2011 was formally adopted in November 2011 and is the basis of the levels presented in this publication.

Table A lists the ISCED 2011 levels used in *Education at a Glance 2025* (OECD/Eurostat/UNESCO Institute for Statistics, 2015[2]).

Table A. Education levels under the ISCED 2011 classification

Terms used in this publication	ISCED classification
Early childhood education Refers to early childhood programmes that have an intentional education component and aim to develop cognitive, physical and socio-emotional skills necessary for participation in school and society. Programmes at this level are often differentiated by age.	ISCED 0 (sub-categories: 01 for early childhood educational development and 02 for pre-primary education)
Primary education Designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects. Entry age: between 5 and 7. Typical duration: six years.	ISCED 1
Lower secondary education Completes provision of basic education, usually in a more subject-oriented way with more specialist teachers. Programmes may differ by orientation, general or vocational, though this is less common than at upper secondary level. Entry follows completion of primary education and typical duration is three years. In some countries, the end of this level marks the end of compulsory education.	ISCED 2
Upper secondary education Stronger specialisation than at lower secondary level. Programmes offered are differentiated by orientation: general or vocational. Typical duration is three years.	ISCED 3
Post-secondary non-tertiary education Serves to broaden rather than deepen the knowledge, skills and competencies gained in upper secondary level. Programmes may be designed to increase options for participants in the labour market, for further studies at tertiary level or both. Programmes at this level are usually vocationally oriented.	ISCED 4
Short-cycle tertiary education Often designed to provide participants with professional knowledge, skills and competencies. Typically, they are practically based, occupation-specific and prepare students to enter the labour market directly. They may also provide a pathway to other tertiary education programmes (ISCED levels 6 or 7). The minimum duration is two years.	ISCED 5
Bachelor’s or equivalent level Designed to provide participants with intermediate academic and/or professional knowledge, skills and competencies, leading to a first degree or equivalent qualification. Typical duration: three to four years full-time study. This level is referred to as “bachelor’s” in the publication.	ISCED 6
Master’s or equivalent level Stronger specialisation and more complex content than bachelor’s level. Designed to provide participants with advanced academic and/or professional knowledge. May have a substantial research component. Programmes of at least five years’ duration preparing for a long-first degree/qualification are included at this level if they are equivalent to a master’s level programme in terms of their complexity and content. This level is referred to as “master’s” in the publication.	ISCED 7
Doctoral or equivalent level Designed to lead to an advanced research qualification. Programmes at this level are devoted to advanced study and original research and exist in both academic and professional fields. This level is referred as “doctoral” in the publication.	ISCED 8

In some indicators, intermediate programmes are also used. These correspond to recognised qualifications from ISCED 2011 level programmes which are not considered as sufficient for ISCED 2011 completion and are classified at a lower ISCED 2011 level.

Fields of education and training

Within ISCED, programmes and related qualifications can be classified by field of education and training as well as by level. Following the adoption of ISCED 2011, a separate review and global consultation process took place on the ISCED fields of education. The ISCED fields were revised, and the UNESCO General Conference adopted the ISCED 2013 Fields of Education and Training classification (ISCED-F 2013) (UNESCO Institute for Statistics, 2014[3]) in November 2013 at its 37th session. The broad ISCED-F fields considered in this publication are education; arts and humanities; social sciences, journalism and information; business, administration and law; natural sciences, mathematics and statistics; information and communication technologies; engineering, manufacturing and construction; and health and welfare. Throughout this publication, the term "field of study" is used to refer to the different fields of this classification. The term STEM (science, technology, engineering and mathematics) refers to the aggregation of the broad fields of natural sciences, mathematics and statistics; information and communication technologies; and engineering, manufacturing and construction.

Standard error (S.E.)

Some of the statistical estimates presented in this report are based on samples of adults, rather than values that could be calculated if every person in the target population in every country had answered every question. Therefore, each estimate has a degree of uncertainty associated with sampling and measurement error, which can be expressed as a standard error. The use of confidence intervals is a way to make inferences about the population means and proportions in a manner that reflects the uncertainty associated with the sample estimates. In this report, confidence intervals are stated at a 95% level. In other words, the result for the corresponding population would lie within the confidence interval in 95 out of 100 replications of the measurement on different samples drawn from the same population.

In tables showing standard errors, the column with the heading "%" indicates the average percentage, and the column with the heading "S.E." indicates the standard error. Given the survey method, there is a sampling uncertainty in the percentages (%) of twice the standard error (S.E.). For example, for the values % = 10 and S.E. = 2.6, 10% has a 95% confidence interval of approximately twice (1.96) the standard error of 2.6. Thus, the true percentage would probably (error risk of 5%) be somewhere between 5% and 15% ("confidence interval"). The confidence interval is calculated as: $\% +/-1.96 * S.E.$, i.e. for the previous example, $10\% - 1.96 * 2.6 = 5\%$ and $10\% + 1.96 * 2.6 = 15\%$.

Symbols for missing data and abbreviations

These symbols and abbreviations are used in the tables and figures:

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

b There is a break in the series.

c There are too few observations to provide reliable estimates.

d Includes data from another category.

m Data are not available – either missing or the indicator could not be computed due to low respondent numbers.

q Data have been withdrawn at the request of the country concerned.

r Values are below a certain reliability threshold and should be interpreted with caution.

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

The statistical software used in the computation of indicators in this publication may result in slightly different values past the fourth significant digit after the decimal point when compared to national statistics.

Further resources

Education at a Glance: Sources, Methodologies and Technical Notes (https://doi.org/10.1787/fcfaf2d1-en) provides information on the methods used to calculate the indicators, on the interpretation of the indicators in the respective national contexts, and on the data sources involved. All post-production changes to this publication are listed at: https://www.oecd.org/about/publishing/corrigenda.htm (corrections).

Education at a Glance uses the OECD's StatLink service. A URL at the end of each chapter leads to a corresponding Excel file containing the underlying data for the chapter. These URLs are stable and will not change. 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.

The *Education Database* on the OECD Data Explorer (https://data-explorer.oecd.org/) provides the raw data and indicators presented in *Education at a Glance*, as well as the metadata that provide context and explanations for countries' data. It allows users to break down data in more ways than is possible in this publication in order to conduct their own analyses of education systems in participating countries. It is also updated at regular intervals.

Layout of tables

In all tables, the numbers in parentheses at the top of the columns are used for reference. When a consecutive number does not appear, that column is available online through the StatLink indicated at the end of the chapter.

Abbreviations used in this report

AES	Adult Education Survey
ECEC	Early childhood education and care
EEA	European Economic Area
ESS	European Social Survey
GDP	Gross domestic product
ICT	Information and communication technologies
ISCED	International Standard Classification of Education
LFD	Master's long-first degree
NEET	Neither employed nor in education or training
NPV	Net present value
PIAAC	Survey of Adult Skills
PISA	Programme for International Student Assessment
PPP	Purchasing power parity
R&D	Research and development
S.E.	Standard error
STEM	Science, technology, engineering and mathematics
TALIS	Teaching and Learning International Survey
UIS	UNESCO Institute of Statistics

UOE Refers to the data collection managed by the three organisations, UNESCO, OECD, Eurostat

VET Vocational education and training

References

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264304444-en. [1]

OECD/Eurostat/UNESCO Institute for Statistics (2015), *ISCED 2011 Operational Manual: Guidelines for Classifying National Education Programmes and Related Qualifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264228368-en. [2]

UNESCO Institute for Statistics (2014), *ISCED Fields of Education and Training 2013 (ISCED-F 2013): Manual to Accompany the International Standard Classificiation of Education 2011*, UNESCO Institute for Statistics, Montreal, https://doi.org/10.15220/978-92-9189-150-4-en. [3]

Executive summary

Education at a Glance is the definitive guide to the state of education around the world. It analyses all levels of education and provides data on topics such as attainment, enrolment, finance and the organisation of education systems. The 2025 edition puts a special focus on tertiary education.

Educational attainment remains high, but unequal opportunities persist

With 48% of young adults holding a tertiary qualification across the OECD countries, educational attainment is higher than ever. However, growth in tertiary attainment has slowed since 2021. Between 2000 and 2021, the average tertiary attainment rate among young adults increased by about 1 percentage point per year across the OECD, while since 2021 the average annual increase has fallen to just 0.3 percentage points.

Unequal opportunities are holding back some learners who would benefit from a tertiary education. In all countries, children from disadvantaged backgrounds are far less likely to reach higher levels of education than those from more advantaged backgrounds. On average across the OECD, only 26% of young adults whose parents did not complete upper secondary education hold a tertiary qualification, compared to 70% of young adults with at least one tertiary-educated parent.

A few countries and economies have made progress in closing the opportunity gap. In Denmark, tertiary attainment among young adults whose parents did not complete upper secondary education has increased by 20 percentage points since 2012, reaching 49%, above the OECD average among young adults of all backgrounds. England and the Flemish Community of Belgium have also seen progress in reducing the tertiary attainment gap.[2]

Equitable access to education: a key driver of social mobility

Supporting equitable access to tertiary education remains crucial to strengthening social mobility as educational attainment is closely reflected in labour market outcomes. While an upper secondary qualification offers good protection against unemployment in most countries, many high-skilled and well-paid jobs require a tertiary qualification. Adults with a tertiary qualification earn, on average, 54% more than those with only upper secondary education. Even after accounting for the costs of a tertiary education, the average lifetime financial benefit of obtaining a tertiary qualification exceeds USD 300,000 across the OECD. The earnings advantage is especially large for those with a master’s or doctoral qualification, who earn on average 83% more than those with upper secondary attainment.

In order to give everyone an equal opportunity to access those jobs and increase social mobility, it is essential to break the link between socio-economic background and educational achievement. At a time when skills shortages are prevalent across many sectors this would also provide broader labour market benefits by increasing the pool of skilled workers.

[2] The magnitude of this change is subject to larger statistical uncertainty than other estimates in the report due to small sample sizes.

Improving completion rates in tertiary education

Providing access to tertiary education is not enough if students do not complete their programmes. Newly collected data from over 30 OECD and partner countries show that only 43% of new entrants to bachelor's programmes graduate within the expected programme duration; this rises to 59% after an additional year and 70% after three additional years. Completion rates are particularly low among men, with only 63% completing a bachelor's degree within three years beyond the expected end date, compared to 75% of women.

Low completion rates have multiple causes, including a mismatch between students' expectations and programme content, inadequate preparation for programme demands, limited academic and social support and financial barriers. Policy interventions to improve completion rates can include strengthening academic preparation and career guidance in secondary education, as well as designing tertiary programmes with clearly defined sequences of courses and support measures that guide students progressively towards graduation. In addition, giving people credentials for specific skills they have learned - even if they do not complete their studies - can help them show employers what they are capable of. This would make partial completion of tertiary programmes more valuable.

Beyond formal credentials: the skills gap challenge

Although attainment and completion rates offer valuable information on education system performance, equipping learners with relevant skills is ultimately more important. Despite rising educational attainment, literacy and numeracy skills of adults in most OECD countries stagnated or declined between 2012 and 2023, with a significant proportion of the adult population in OECD countries having low skills. Among adults without upper secondary education, 61% scored at or below Level 1 in literacy in the OECD Survey of Adult Skills, meaning they could understand, at most, short texts on familiar topics. Among those with upper secondary attainment, 30% do not exceed Level 1, and even among adults with tertiary attainment, 13% score at or below this level. These results underscore that simply expanding educational opportunities is not enough; education systems must also ensure that learners develop the skills they need to thrive.

Tertiary education systems should therefore maintain rigorous standards even as they expand access. However, they must also adapt to a more diverse set of learners with different prior education and career expectations. This implies providing a broader range of skills, including advanced applied skills. To help prospective students identify programmes with the greatest benefits, tertiary education systems also need better ways to clearly signal the skills that their graduates possess.

Tackling teacher shortages to strengthen education systems

Highly qualified teachers are essential for high-performing education systems at all levels, but teacher shortages make it harder to recruit and retain well-trained educators. While most education systems can still fill nearly all open teaching positions, they do not always attract the highest qualified candidates. At the start of the 2022/23 school year, only Austria, the Netherlands, Sweden, and the Flemish and French Communities of Belgium reported more than 2% of teaching positions being unfilled. However, on average, nearly 7% of secondary teachers across the OECD are not fully qualified, meaning they do not hold all the required credentials.

High teacher turnover can further complicate recruitment. In most countries where data is available, 1% to 3% of teachers retire annually. However, the proportion of teachers leaving the profession for reasons other than retirement varies considerably, as it is influenced not only by teachers' working conditions and contractual arrangements, but also by national labour market contexts and career mobility cultures. In Denmark, Estonia and England, nearly 10% of teachers resign annually, necessitating a constant high level of recruitment. By contrast, fewer than 1% of teachers in France, Greece and Ireland resign each year, which creates greater staffing stability but also limits the renewal of the teaching workforce.

Attracting second-career teachers can help alleviate shortages while introducing broader skill sets into the profession. Sixteen out of 28 countries and economies with available data offer dedicated alternative pathways for individuals changing careers. Complementary measures to improve working conditions and provide opportunities for career progression could further support teacher recruitment and retention.

PIAAC. Proficiency in key information-processing skills among adults

Highlights

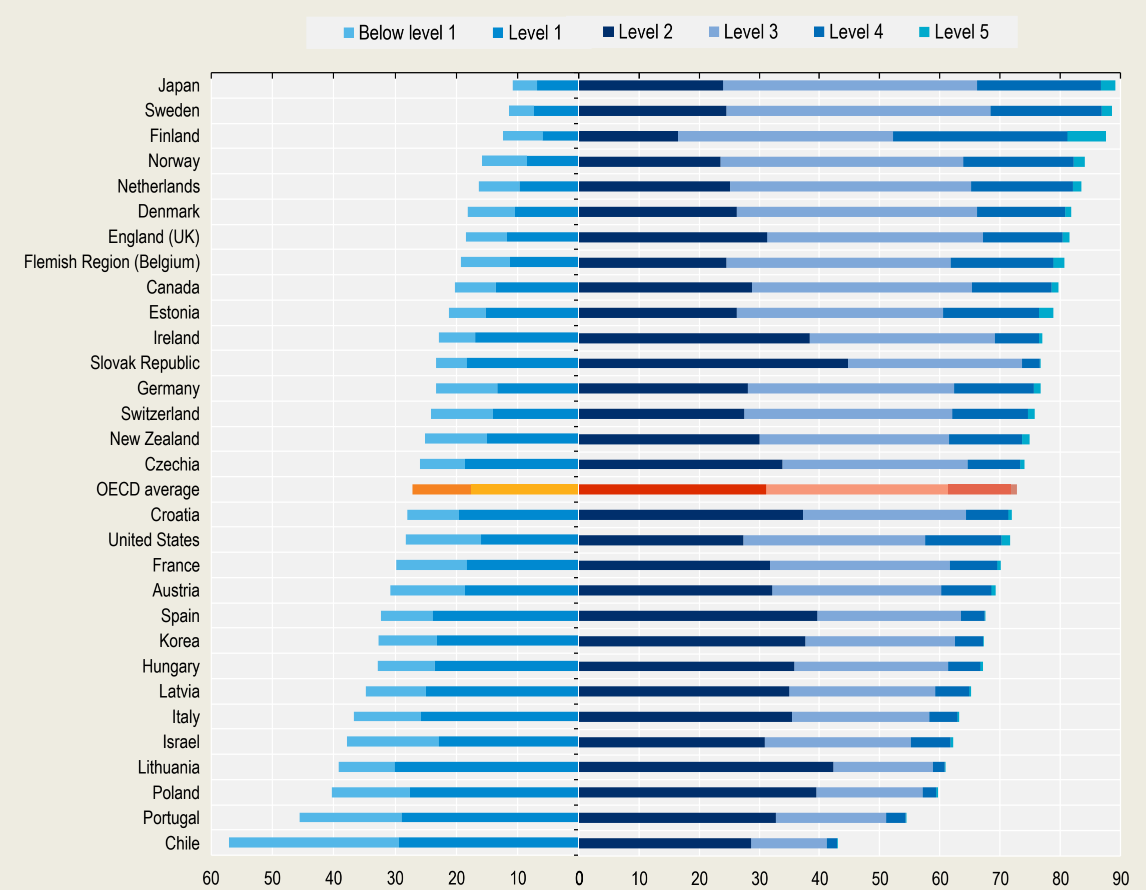
- On average, 61% of adults with below upper secondary attainment in OECD countries do not reach Level 2 in literacy proficiency (where Level 5 is the highest), meaning they are not able to access and understand information in long texts with some distracting information. This compares to 30% of those with upper secondary or post-secondary non-tertiary attainment and only 13% of those with a tertiary qualification. The wide literacy gap across education levels highlights the cumulative impact of formal education on adult skills.
- Across OECD countries, tertiary-educated adults (25-64 year-olds) score around 283 points in literacy proficiency on average, ranging from 249 score points in Chile to 314 in Finland, while those with below upper secondary attainment score around 207 points, ranging from 162 score points in Chile to 240 in Sweden. The proficiency gap between these two groups averages 76 points across the OECD.
- On average, 25-34 year-olds outperform their 45-54 year-old peers in literacy proficiency by 15 score points across OECD countries. When broken down by educational attainment, however, the proficiency gap by education level matters more than age.

Context

As economies and societies undergo rapid technological, demographic and environmental transformations, the demand for strong foundational skills – such as literacy, numeracy and problem solving – has become more pressing than ever. While *Education at a Glance* traditionally focuses on indicators of educational attainment and participation, understanding the actual skills possessed by adults is essential for assessing the effectiveness of education systems in preparing individuals for lifelong learning, employability and civic engagement. Literacy and numeracy, in particular, are considered foundational skills, in that they are essential for other types of learning: first people learn to read and then they learn through reading. Given that these skills are largely acquired and developed through formal education, measuring proficiency in literacy and numeracy can give governments and policy makers an indication of the effectiveness of their education systems. Literacy and numeracy have become core requirements for navigating increasingly data-driven workplaces and everyday life, from managing personal finances to interpreting public health information.

Figure 1. Proficiency in literacy among adults (2023)

Survey of Adult Skills (PIAAC); share of 25-64 year-olds scoring at each proficiency level in literacy



For data, see Table 2. For a link to download the data, see Tables and Notes section.

Although closely related to each other, proficiency in literacy and numeracy and educational attainment measure different things. Qualifications earned through formal education do not always reflect the level of an individual's literacy or numeracy skills – even at the point in life when those qualifications are acquired. Educational qualifications also represent other types of skills that are not reflected in literacy and numeracy proficiency, such as specialised (or practical) knowledge and work-specific skills as well as social and emotional skills and in developing attitudes and motivations that, though crucial, are not directly captured in achievement tests.

Educational attainment has long been widely used as a proxy for skill levels in comparative education analysis. However, findings from the OECD Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), demonstrate that qualifications do not always align with functional competencies. Many adults with similar levels of formal education exhibit markedly different proficiency levels, depending on the quality of their schooling, the opportunities they've had to use and maintain their skills, and broader socio-economic conditions. Conversely, some individuals with relatively low educational attainment may demonstrate strong skill levels, acquired through informal learning, job experience or reskilling later in life.

The PIAAC report *Do Adults Have the Skills They Need to Thrive in a Changing World?* (OECD, 2024[1]) highlights how large shares of adults in many countries perform below minimum proficiency in numeracy and literacy, limiting their ability to fully participate in labour markets and society. The report also stresses that skill gaps between countries – and within countries between socio-demographic groups – remain significant and persistent. For example, foreign-born adults, older individuals and those with lower levels of formal education are disproportionately represented among low-skilled populations. These findings underline the need to go beyond qualifications and assess skills directly, particularly in the context of rapid labour-market change and growing digitalisation.

This chapter uses data from both Cycle 1 (2012-15) and Cycle 2 (2023) of the Survey of Adult Skills to provide a cross-national and longitudinal perspective on adult proficiency, particularly in literacy. The analysis examines how skill levels are distributed across countries and demographic groups, how they have evolved over time, and how they relate to educational attainment. By comparing results across the two survey cycles, the chapter also assesses countries' progress in addressing skill gaps over the past decade.

By integrating skill-based indicators into *Education at a Glance*, this chapter complements traditional attainment-based metrics and enhances understanding of the real capabilities of adult populations. Doing so supports more targeted policy interventions, particularly for countries seeking to improve lifelong learning systems, upskill low-performing groups or align education provision with the evolving needs of the economy. As underscored in the PIAAC international report, fostering a skilled adult population is not only a matter of individual opportunity – it is also critical to building more productive, equitable and resilient societies.

Other findings

- On average across OECD countries, 60% of tertiary-educated adults score at or above Level 3 in literacy proficiency, meaning they can interpret, evaluate, and integrate information across complex or lengthy texts, reaching over 80% in Finland and Japan. This falls to only 12% on average among those with below upper secondary attainment, with Chile recording the smallest share.
- On average across OECD countries, 25-64 year-old women outperform their male peers in literacy proficiency. However, gender gaps in literacy are small on average, and mask larger cross-country variations. They are widest among low-educated adults and vary in significance and direction across countries.
- Literacy scores have declined slightly over the past decade on average across OECD countries, with the largest falls among those with the lowest attainment. Average scores fell by 19 score points for adults with below upper secondary education, 12 score points for those with upper secondary or post-secondary non-tertiary attainment and 9 score points for those with tertiary attainment.
- Among foreign-born adults of foreign-born parents, those who speak the language of the host country at home scored on average 247 points in literacy proficiency (a 19 point gap compared to native-born adults) while those who do not scored 229 points (a 38 point gap). Countries such as Canada, Ireland, Lithuania, New Zealand and the Slovak Republic have comparatively small gaps between native-born and foreign-born adults, particularly among those who speak the host language at home. On average, the literacy proficiency gap by immigration background is narrower among adults with a tertiary qualification (41 points) than among those with upper secondary or post-secondary non-tertiary education (47 points) and below upper secondary education (49 points).

Analysis

This chapter introduces the concept of information-processing skills and presents key indicators from the PIAAC international report (OECD, 2024[1]). In the Survey of Adult Skills, information-processing skills refer to the cognitive abilities required to understand, evaluate, use and engage with written and numerical information in daily life and work contexts. These skills, comprising literacy, numeracy and problem solving, are essential for individuals to effectively navigate and adapt to the demands of the modern information-based economy.

The first section provides an overview of the distribution of proficiency levels in literacy, numeracy and adaptive problem-solving (see section on Definitions) across participating countries and subnational entities. Subsequent sections break down these results by educational attainment, age group, gender and migrant background. For brevity, the chapter focuses primarily on literacy, as the patterns observed are similar across the other skill domains. Additional analyses of PIAAC data are presented in other chapters in Part A.

Data from Cycle 2 of the Survey of Adult Skills reaffirm the strong link between adults' proficiency in literacy, numeracy and adaptive problem-solving and a wide range of individual and societal outcomes. These foundational and transversal skills not only support participation in the labour market, but also enable individuals to engage meaningfully in civic life, navigate complex information environments, and manage their health, finances and daily tasks more effectively. High levels of proficiency in these domains are associated with greater trust in others and institutions, greater political efficacy and better self-reported health. Conversely, limited skills constrain life opportunities and reinforce social disadvantage across generations (OECD, 2024[1]).

Across countries and demographic groups, greater proficiency in literacy, numeracy and adaptive problem-solving is consistently associated with more favourable outcomes, regardless of formal educational attainment. Adults with strong skills but lower qualifications often outperform their more educated but less proficient peers in many aspects of life, underscoring the distinct and critical role of actual competencies (OECD, 2024[1]). This pattern highlights the importance of focusing not just on access to education, but also on the quality and effectiveness of learning throughout life. It also points to the potential for skills assessments to complement qualifications for recognising individual capabilities.

Comparisons between Cycle 1 (2012-15) and Cycle 2 (2023) of the Survey of Adult Skills show that gaps in proficiency have persisted or even widened in several countries, particularly across socio-economic and generational lines. Although some countries and economies have made progress in raising overall performance or narrowing disparities, others show signs of stagnation or increasing inequality. These findings reflect the combined influence of education and training systems, labour-market structures and access to lifelong learning. They also underscore the urgency of ensuring that all individuals – regardless of age, background or circumstance – have opportunities to develop and maintain the skills needed to adapt, participate and thrive in a rapidly changing world.

Overview of skills proficiency among adults

The review of proficiency scores and levels shows similar results with regard to literacy, numeracy and adaptive problem-solving. Although this section displays the results for all three types of skills, the remainder of the chapter focuses on literacy. The analysis of labour-market and economic outcomes in Chapters A3 and A4 will be based on numeracy proficiency levels instead. Box 1 summarises how the analytical power of the three skill domains differ, and their recommended use in analysis.

Box 1. Choosing the right PIAAC domain for analysis: Literacy, numeracy and adaptive problem solving

PIAAC Cycle 2 assessed the population aged 16 to 65 across three cognitive domains: literacy, numeracy and adaptive problem solving (although this chapter focuses on 25-64 year-olds). These domains are designed to capture distinct but interrelated skill sets that support individuals' personal, civic and economic engagement. All three domains display similar cross-national patterns in terms of average scores and subgroup distributions: although the domains are psychometrically distinct, they are empirically correlated, particularly at the population level.

The scores for the three domains appear similar but are measured using conceptually distinct units. As a result, it is not meaningful to compare proficiency across domains. For instance, if someone scores 240 points in literacy and 260 points in numeracy, it would be incorrect to conclude that they are "better at numeracy than at literacy" or that they possess greater numeracy skills than literacy ones (OECD, 2025[2]).

The domain best suited for analysis depends on the research question, as the choice of domain can meaningfully influence the interpretation of results. Both literacy and numeracy provide effective tools for comparing skills across age, gender and educational attainment but have different strengths. Adaptive problem solving introduces a forward-looking dimension reflecting digital literacy and cognitive flexibility, but its recent introduction and more limited coverage means it is best used as a complementary domain. The PIAAC international report and its data analysis manual support combining domains where possible to provide richer, more nuanced interpretations (OECD, 2024[1]; OECD, 2025[2]).

Literacy is a foundational skill for assessing adult capability and civic engagement. It also tends to exhibit more stable distributions than numeracy, making it particularly effective for monitoring equity and making comparisons across demographic groups. Literacy is broadly communicable to non-specialist audiences, and for these reasons it is the main focus of this chapter.

Numeracy stands out as the preferred domain for analysing economic and labour-market outcomes such as employment prospects and relative earnings, particularly when used alongside educational attainment (OECD, 2014[3]). Numeracy proficiency is strongly linked to employment, earnings and job quality across countries and population groups, even after adjusting for educational attainment (OECD, 2024[1]). Numeracy is often used in regression models focused on employment-related outcomes, because of its closer alignment with the types of quantitative reasoning tasks encountered in the modern workplace (OECD, 2025[2]). Average proficiency by education level reveals consistent gradients in both literacy and numeracy, but numeracy often exposes wider disparities, particularly among highly educated and low-educated adults, and more pronounced skill gradients, particularly by occupation or field of study. Its greater variance and steeper proficiency gradients also makes it more suitable for in-depth stratified or occupational analyses (OECD, 2024[1]). It is therefore the main focus of the PIAAC analysis in Chapters A3 and A4.

Adaptive problem solving, introduced in PIAAC Cycle 2, adds breadth to the assessment framework by measuring individuals' ability to solve complex, unfamiliar tasks in dynamic, technology-rich environments. Although conceptually distinct from both literacy and numeracy, adaptive problem-solving correlates moderately with both and serves as a useful indicator of cognitive flexibility (OECD, 2024[1]). However, its use in demographic analysis has been limited, partly because it has fewer assessment items and narrower country coverage. Adaptive problem solving should therefore be used as a supplementary indicator rather than a primary variable in disaggregated cross-country or subgroup comparisons (OECD, 2025[2]).

Literacy

Literacy proficiency allows individuals to accessing, understanding, evaluating and reflecting on written texts in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society (see section on Definitions). Data from the Survey of Adult Skills (OECD, 2024[1]) provide an updated profile of literacy skills among adults aged 25 to 64, revealing how well countries are preparing their populations for these challenges.

According to the 2023 data, the average literacy score across OECD countries is 259 points, ranging from 214 score points in Chile to 297 score points in Finland (Table 1). On average, 42% of adults performed at or above Level 3 for literacy (30% at Level 3 and 12% at or above Level 4, see Box 2 for short descriptions of proficiency levels), meaning they can understand and respond appropriately to dense or lengthy texts (see section on Definitions). Meanwhile, about 27% of adults perform at or below Level 1, indicating difficulty with basic written information, and 31% at Level 2 indicating those who can, for example, integrate of information from multiple sources (see Box 2). These figures highlight the persistence of significant literacy gaps even in high-income countries (Figure 1 and Table 2).

The highest average scores are observed in Finland, Japan, Norway and Sweden, each scoring well above the OECD average. In these countries, over 60% of adults performed at or above Level 3, while less than 20% were at or below Level 1. At the other end of the scale, Chile, Poland and Portugal report the lowest average literacy scores. In these countries, 40% or more of adults perform at or below Level 1, and 22% or less were at or above Level 3 (Table 2). These results reflect differences not just in education systems but also in broader patterns of adult learning, literacy use in daily life and access to lifelong learning opportunities.

Box 2. Reporting the results

Proficiency levels

In each of the three domains assessed, proficiency is considered as a continuum of ability involving the mastery of information-processing tasks of increasing complexity. The results are represented on a 500-point scale. To help interpret the results, the reporting scales have been divided into "proficiency levels" defined by particular score-point ranges. Six proficiency levels are defined for literacy and numeracy (Levels 1 through 5 plus below Level 1) and five for problem solving in technology-rich environments (Levels 1 through 4 plus below Level 1). Each proficiency level is described in terms of the characteristics of the types of tasks that can be successfully completed by adults with proficiency scores in the range of scores that defines a level. Short descriptions of the types of tasks related to each level are provided below, while more details can be found in the Definitions section and in Tables 2.4, 2.5 and 2.6 in the PIAAC international report (OECD, 2024[1]).

Literacy and numeracy:

Below Level 1: Basic tasks involving simple text or numerical information.

Level 1 (scores equal to or higher than 176 points): Tasks requiring the identification of information in short texts or simple mathematical operations.

Level 2 (scores equal to or higher than 226 points): Tasks involving integration of information from multiple sources or application of basic mathematical concepts.

Level 3 (scores equal to or higher than 276 points): Tasks requiring interpretation and evaluation of complex texts or more advanced mathematical reasoning.

Level 4 (scores equal to or higher than 326 points): Tasks involving complex reasoning and problem-solving with intricate texts or mathematical information.

Level 5 (scores equal to or higher than 376 points): Tasks requiring the synthesis and critical evaluation of complex information or advanced mathematical concepts.

Adaptive problem solving:

Below Level 1: Tasks involving simple problem solving in familiar contexts.

Level 1 (scores equal to or higher than 176 points): Tasks requiring the application of basic strategies to solve problems in well-defined situations.

Level 2 (scores equal to or higher than 226 points): Tasks involving problem-solving in less familiar contexts with some complexity.

Level 3 (scores equal to or higher than 276 points): Tasks requiring adaptive reasoning and problem solving in complex and dynamic situations.

Level 4 (scores equal to or higher than 326 points): Tasks requiring complex reasoning and multi-step solutions to one or more goals.

Numeracy

Numeracy proficiency reflects adults' ability to access, use and reason critically with mathematical content, information and ideas represented in multiple ways in order to engage in and manage the mathematical demands of a range of situations in adult life (see section on Definitions). In an increasingly data-driven society, strong numeracy skills are essential for economic resilience and adaptability.

Across OECD countries and economies, the average numeracy score is 262 points, ranging from 211 score points in Chile to 294 score points in Finland (Table 8, available on line). On average, 44% of adults reach at least Level 3 proficiency (30% at Level 3 and 14% at or above Level 4, see Box 2 for short descriptions of proficiency levels), demonstrating the ability to work with mathematical concepts and reasoning (see section on Definitions). Meanwhile, although 30% reach Level 2 (i.e. those who can integrate concepts from different mathematical procedures, see Box 2), approximately 25% score at or below Level 1, indicating difficulty with basic arithmetic tasks and limited ability to apply numerical reasoning in everyday contexts (Table 9, available on line).

Similarly to literacy, Finland and Japan report the highest numeracy scores, averaging at or above 290 points, and a majority of their adult populations score at or above Level 3. In contrast, adults in Chile, Poland and Portugal record the lowest average scores, below 240 points. In these countries, at least 39% of adults score at or below Level 1, with only a small fraction reaching Level 3 or above (Table 8 and Table 9, available on line). These findings point to persistent gaps in basic numeracy that may limit individuals' participation in training, employment and civic life.

Adaptive problem-solving

In a rapidly evolving digital world, adaptive problem-solving is increasingly essential. This skill refers to the capacity to achieve one's goals in a dynamic situation, in which a method for reaching a solution is not immediately available. It requires engaging in cognitive and metacognitive processes to define the problem, search for information, and apply a solution in a variety of information environments and contexts (see section on Definitions). It is crucial for navigating both the workplace and daily life, especially as technology becomes more embedded in social, financial and civic activities.

The average score for adaptive problem solving is 249 points across participating OECD countries and economies (Table 15, available on line). On average, 31% of adults reach at least Level 3 of proficiency in this domain (26% at Level 3 and 5% at Level 4), meaning that they can integrate simultaneously several important variables and consider the impact of several problem elements on each other, while 31% are at or below Level 1 (Table 16, available on line), meaning they struggle with tasks that involve basic digital interfaces or routine problem solving (see section on Definitions).

Finland, Japan and Sweden I record the highest average proficiency in this domain – above 270 score points – with at least 52% of adults achieving at or above Level 3. In contrast, Chile reports the lowest average proficiency, at 214 score points, with only 10% of adults reaching at or above Level 3 (Table 15 and Table 16, available on line).

These differences suggest that efforts to improve problem solving must go beyond technical skills and address broader issues of access, confidence and opportunities to practise such skills in daily life.

Literacy proficiency by educational attainment

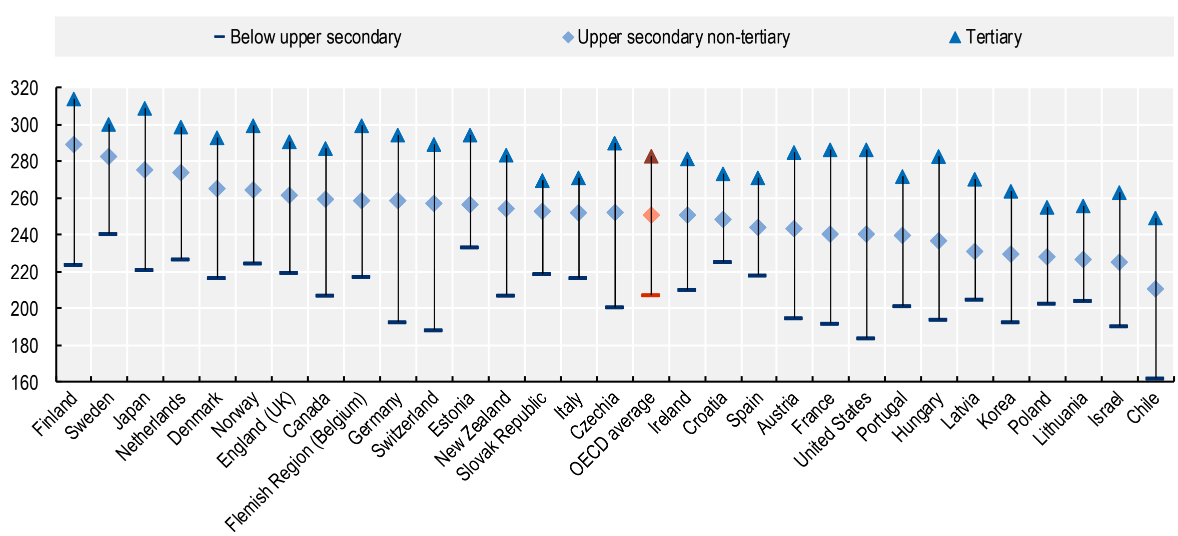
Educational attainment is a major determinant of literacy proficiency in adulthood. Formal education lays the foundation for reading comprehension, vocabulary development and the ability to analyse and synthesise text – skills that remain essential well beyond the classroom. However, the extent to which educational qualifications translate into actual skills can vary across countries, systems and demographic groups. Although higher education levels are associated with higher literacy scores, there are cross-country variations in how pronounced these differences are.

Across participating OECD countries and economies, adults with tertiary education average around 283 score points in literacy, compared to about 207 score points for those with below upper secondary education – a 76 point gap (Figure 2). The share of those scoring at or above Level 3 is 60% among tertiary-educated adults, but only 12% among those with below upper secondary attainment. Conversely, 61% of adults with below upper secondary education are at or below Level 1, compared to just 13% of tertiary-educated adults (Table 2). These figures confirm the steep literacy gradient by education level and underscore the cumulative effect of formal education on adult skill levels.

Finland, Japan, Norway and Sweden show particularly strong outcomes for tertiary-educated adults, with average scores of 300 points or above and more than 70% reaching Level 3 and above in literacy (Table 1 and Table 2). The literacy gap between low- and high-educated adults is relatively narrow in countries like Croatia and the Slovak Republic, suggesting more equitable education and lifelong learning systems. In contrast, countries such as Chile, Switzerland and the United States have much lower literacy scores among adults with below upper secondary education and over 70% of low-educated adults at or below Level 1. Austria, France and Germany also show wide gaps, highlighting systemic challenges in foundational education and limited opportunities for skill development among low-qualified adults (Figure 2 and Table 2).

Figure 2. Adults' mean literacy proficiency, by educational attainment (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in score points



For data, see Table 1. For a link to download the data, see Tables and Notes section.

Literacy skills by age group

The Survey of Adult Skills found that in nearly all OECD countries and economies the highest average proficiency is observed among younger age groups (16-24 year-olds, and especially 25-34 year-olds), while older age groups tend to score the lowest (OECD, 2024[1]). This is true across different levels of educational attainment, with young adults (25-34 year-olds) scoring on average 15 points higher than older adults (45-54 year-olds). High literacy scores for young adults reflect a combination of age-related cognitive factors and cohort effects, particularly linked to the expansion of education and training opportunities (Kautz et al., 2014[4]). Although the overall pattern is consistent across countries, the size of the generational gap and the impact of educational attainment on literacy proficiency vary considerably.

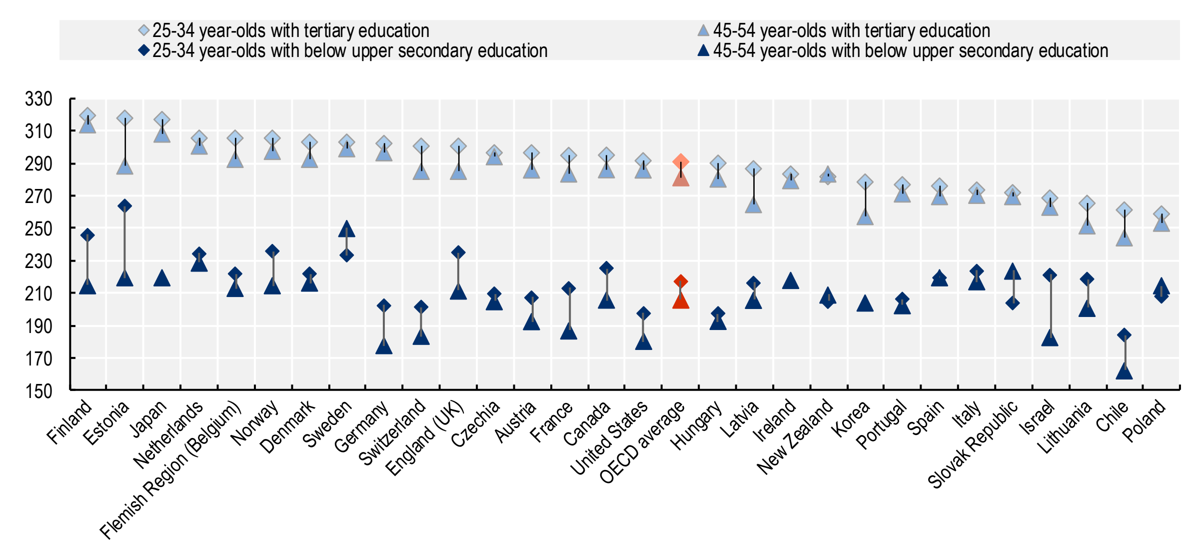
In all participating OECD countries and economies, tertiary-educated 25-34 year-olds outperform their older peers in literacy proficiency, averaging 291 score points compared to 281 score points among tertiary-educated 45-54 year-olds. Finland, Estonia and Japan lead in literacy scores among tertiary-educated young adults, averaging above 310 score points (Figure 3 and Table 3).

Tertiary-educated young adults also average 73 score points more than their peers with below upper secondary attainment. Similar gaps are observed among 45-54 year-olds, with a 75 point difference between those with tertiary and below upper secondary attainment (Figure 3 and Table 3).

The proficiency gap by education level is substantial across countries and seems to matter more than age factors. The average difference between tertiary-educated and low-educated adults (73-75 points) far exceeds the average 15 point gap observed between younger and older adults. In Germany and Switzerland, the gap is over 99 score points between young adults with tertiary education and those with below upper secondary education, showing pronounced inequalities in proficiency outcomes linked to educational background. In contrast, countries like Italy, Lithuania and Poland demonstrate relatively smaller gaps by attainment level, suggesting more equitable educational systems or less stratification in literacy outcomes (Figure 3 and Table 3).

Figure 3. Adults' mean literacy proficiency, by educational attainment and age group (2023)

Survey of Adult Skills (PIAAC); in score points



For data, see Table 3. For a link to download the data, see Tables and Notes section.

Gender differences in literacy skills

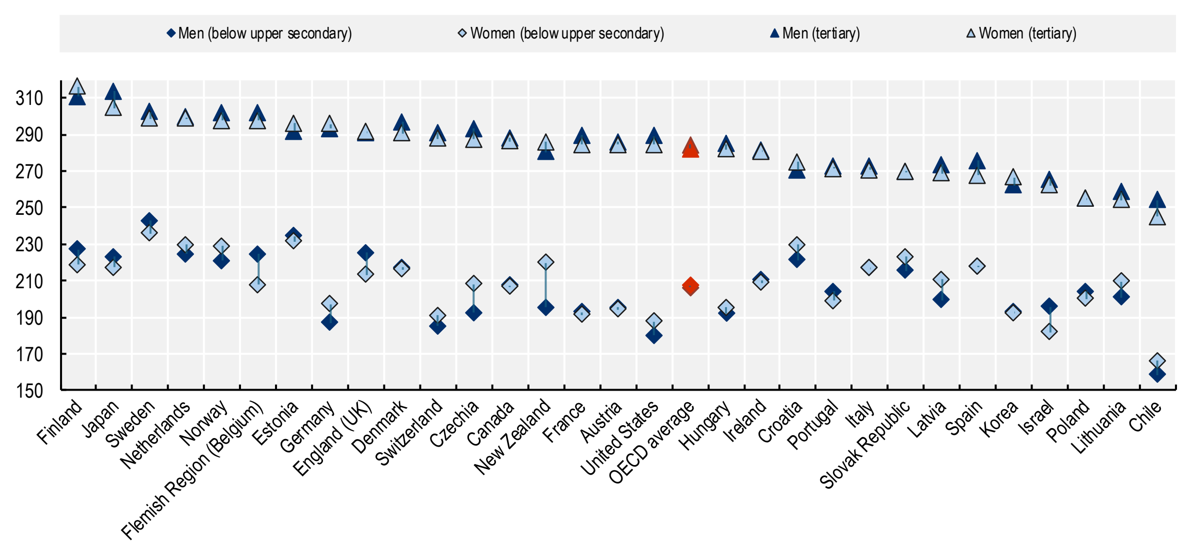
Gender differences in proficiency are generally small across OECD countries (OECD, 2024[1]). The Survey of Adult Skills found that, on average, women score 3 points higher than men in literacy proficiency. Among tertiary-educated adults, men score 2.2 points higher than women in literacy proficiency, with minimal differences across countries (Figure 4). In contrast, among those with lower educational attainment (below upper secondary), women score 1.1 points higher on average, but the gender gaps vary significantly in size and direction across countries and economies (Figure 4).

Among adults with below upper secondary attainment, men outperform their female counterparts by 17 score points in the Flemish Region (Belgium) and by 14 score points in Israel. Conversely, women outperform men in Czechia (16 points) and New Zealand (25 points). Among those with tertiary attainment, gender gaps are generally smaller. The largest differences are in Chile and Japan, where highly educated men outperform women by more than 9 points (Figure 4).

Educational attainment remains a stronger predictor of literacy proficiency than gender alone. Compared to the average gender gap of just 3 points, on average across OECD countries and economies, the gap between tertiary-educated women and those with below upper secondary attainment is 75 score points. For men, the corresponding gap is 78 points. The largest education-related proficiency gaps are observed in Germany, Switzerland and the United States, where differences exceed 106 points for men and 97 points for women. This underscores the critical role of educational level in shaping literacy outcomes (Figure 4).

Figure 4. Adults' mean literacy proficiency, by educational attainment and gender (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in score points



For data, see Table 1. For a link to download the data, see Tables and Notes section.

Comparatively, differences in numeracy and adaptive problem-solving proficiency are also relatively small, with men displaying higher average scores. On average, men score 10 points higher than women in numeracy (see Table 8, available on line) and 3 points higher in adaptive problem solving (see Table 15, available online). In numeracy, gender gaps are more pronounced among tertiary-educated adults. Women are under-represented in STEM and less likely to work in numeracy-intensive jobs, partly explaining numeracy gender performance (OECD, 2024[1]). These gaps mirror patterns seen in PISA and highlight the lasting impact of educational and occupational trajectories on adult skill development (OECD, 2024[1]).

Moreover, between Cycle 1 and Cycle 2 of the Survey of Adult Skills, literacy proficiency has declined more strongly among men than women (OECD, 2024[1]). As a result, gender gaps in literacy have narrowed in many countries, with women now outperforming men on average (OECD, 2024[1]). This shift is linked to the transversal nature of literacy proficiency (OECD, 2019[5]). Unlike numeracy, which is more strongly tied to fields and occupations more commonly pursued by men, literacy is less dependent on occupational context and thus less sensitive to gendered choices in education and employment (Borgonovi, Choi and Paccagnella, 2021[6]; OECD, 2024[1]). In Chile, Germany and the Flemish Region (Belgium), the gender gap in numeracy narrowed due to improvements in women's proficiency, whereas in most other countries, the narrowing resulted from significant declines in men's numeracy scores (Table 17 on line).

Trends in adult literacy proficiency between PIAAC cycles

Monitoring changes in adult literacy proficiency over time helps assess the long-term effectiveness of education and training systems, the impact of demographic and labour-market shifts, and whether adult learning opportunities are keeping pace with societal needs. Comparisons between Cycle 1 (2012-15) and Cycle 2 (2023) provide insight into whether literacy levels are improving, stagnating or declining (see Box 3 for the methodological considerations involved in comparing the results of the two cycles). Average proficiency has remained relatively similar between cycles although most countries experienced slight changes, with some seeing gains due to expanded educational attainment in younger cohorts, and others declines due to population ageing or limited adult learning engagement.

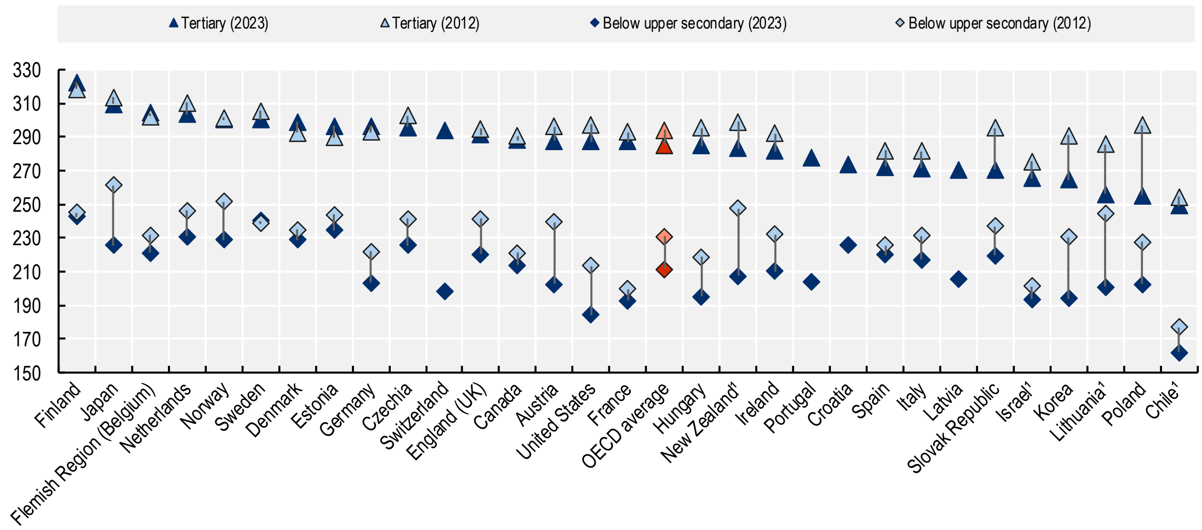
On average across participating OECD countries and economies with data for all years, average literacy proficiency among 25-64 year-olds fell by 9 score points since PIAAC Cycle 1, to 260 points (Table 6, available on line). However some countries, such as Finland, recorded meaningful increases in average literacy scores – by 10 points – suggesting sustained improvements in education quality or participation in adult learning. In contrast, Lithuania and Poland saw declines of over 25 score points. These declines may reflect ageing populations or changes in the composition of the adult population. Meanwhile, countries like Estonia, Norway and Flemish Region (Belgium) reported relatively stable scores over time.

This pattern of slight overall decrease, coupled with diverging national trajectories, points to the importance of national policy contexts in shaping adult skill levels. Countries investing in lifelong learning and inclusive education systems appear better positioned to sustain or improve literacy skills over time (OECD, 2023[7]). The declines in scores over time are disproportionally attributable to changes among adults with lower attainment. The average score declined by 19 score points for adults with below upper secondary education, by 12 score points for those with upper secondary or post-secondary non-tertiary attainment and by 9 score-points for tertiary-educated adults (Figure 5 and Table 6, available on line).

Comparing differences in literacy proficiency between Cycle 1 and Cycle 2 among adults in the same age group reveals a general downward trend. On average across OECD countries and economies with data for both cycles, adults aged 25-34 in 2023 scored 9 points lower than their counterparts in 2012-15, while 45-54 year-olds saw a 7 point decline. These declines are evident across most OECD countries, although the scale varies by country. Among the younger age group, the largest falls are observed in Lithuania (26 points), New Zealand (23 points), Poland (34 points) and the Slovak Republic (26 points) (Table 7, available on line).

Figure 5. Trends in adults' mean literacy proficiency, by educational attainment (2012 and 2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in score points



1. Year of reference: 2015 instead of 2012.
For data, see Table 6, available on line. For a link to download the data, see Tables and Notes section.

The decline in literacy proficiency is most pronounced among those with below upper secondary education, where proficiency scores fell by an average of 17 points for younger adults and 20 points for older adults. Austria, Japan and New Zealand stand out in this category: in Austria and Japan, the decline reaches 41 points for older adults, while in New Zealand, both age groups experienced declines of over 40 points. For those with upper secondary education, older adults showed on average a 11 point decline in literacy proficiency, compared to 9 points for the younger cohort. Tertiary-educated adults also experienced declines, although to a lesser extent (8 points for younger adults and 7 points for older adults on average) (Table 7, available on line).

Comparing 25-34 year-olds in 2012-15 with 35-44 year-olds in 2023 and so on provides further insight into ageing effects on skills on cohorts over time. Average literary proficiency among 35-44 year-olds in 2023 was 15 score points lower than that for 25-34 year-olds in 2012-15, while 35-44 year-olds in 2012-15 had an average literacy proficiency 17-score points higher than 45-54 year-olds in 2023. For older adults – comparing those aged 45-54 in 2012-15 to those aged 55-64 in 2023 – the decline reaches 21 points (Table 7, available on line). These findings confirm the general pattern of skill attrition with age, which may reflect both natural cognitive decline and reduced opportunities for skill use (OECD, 2019[5]).

However, the change in proficiency differs by educational attainment. Among adults with below upper secondary education, the younger cohort (aged 25-34 in 2012-15) experienced an average decline in literacy proficiency of 26 score points, which was slightly larger than the 25-point decline experienced by the older cohort (aged 45-54 in 2012-15). There are a few exceptions to the general trend. In Estonia, the Flemish Region of Belgium and Japan, the drop among older low-educated adults was over 20 points larger than among their younger peers. At higher attainment levels, although both cohorts saw proficiency declines, these were more pronounced among older adults. For those with upper secondary education, older adults showed on average a 21-point decline in literacy proficiency, compared to 16 points for the younger cohort. Among tertiary-educated adults, the decline was 20 points for older adults compared to 12 points for younger ones (Table 7, available on line). These smaller declines suggest that higher educational attainment can buffer, but not entirely offset, skill loss over time.

Overall, the decline in literacy proficiency appears to be driven by a combination of factors affecting both younger and older adults. Larger declines among younger adults with low educational attainment may point to weaknesses in initial education, while skill loss among older adults suggests broader societal challenges, such as limited opportunities for skill use. These dynamics also vary by country: for instance, in Estonia and Japan the older cohort showed a greater decline in skills than the younger one across all education levels, whereas in Sweden and the Netherlands, the steepest declines are observed among younger adults. These differences highlight the need for country-level analysis to identify individual patterns that may be obscured by the overall averages.

Box 3. Comparability of results across PIAAC cycles

The 2023 Survey of Adult Skills (PIAAC) introduced several modifications to the design of the survey instruments (both the background questionnaire and the cognitive assessment) and the data collection. These changes sought either to adapt the instruments to societal and contextual developments that occurred between the two cycles, or to correct and improve measurements (OECD, 2024[8]). Some caution is therefore advised when comparing results across the two cycles.

A more detailed discussion of the differences between the first and second cycle of PIAAC can be found in the *Reader's Companion* (OECD, 2024[8]) as well as in the *Data Analysis Manual* (OECD, 2025[2]) and in the PIAAC Technical Report (OECD (forthcoming)[9]).

Linking error

When comparing average proficiency scores between the first and second cycles of PIAAC, a linking error must be taken into account due to changes in the set of assessment items. Although about one-third of the items used in Cycle 2 were trend items used in Cycle 1, the same score does not have exactly the same meaning in both cycles. This difference is modelled as a random variable known as the *linking error* (3.27 for literacy, 2.95 for numeracy), which should be added to the standard error of any trend statistic expressed as a proficiency score (OECD, 2025[2]). It should be noted that the linking error does not apply to changes in score-point differences between subgroups (e.g. gender or age gaps in proficiency scores), as the associated uncertainty cancels out.

Doorstep interviews

In Cycle 2, respondents who could not complete the background questionnaire due to language barriers were administered a short, self-completed doorstep interview available in over 40 languages. This collected key demographic and background data (e.g. age, gender, education, employment status and migration history) to generate plausible values, allowing these individuals to contribute to population-level estimates. In Cycle 1, similar respondents were classified as literacy-related non-respondents and excluded from proficiency estimates. For cross-cycle comparisons, adults who only completed the doorstep interview have been excluded, as they would not have received a score in Cycle 1.

Adjusted differences

This chapter does not present adjusted differences between population subgroups. However, the Survey of Adult Skills (PIAAC) provides an analysis of both adjusted and unadjusted differences. Unadjusted differences show the observed gaps in proficiency between groups, while adjusted differences account for differences in socio-demographic characteristics such as age, gender or immigrant background that are independently associated with proficiency. These adjusted estimates, derived from linear regression models, offer insights into the extent to which the observed gaps reflect underlying group differences rather than the effect of the characteristic being studied (e.g. educational attainment). Readers interested in these analyses are referred to the PIAAC international report for detailed results (OECD, 2024[1]) and the technical manual for more details (OECD, 2025[2]).

Skills gaps by migration and language background

Migration and language background can significantly influence adult skill levels, particularly literacy proficiency. Adults born abroad or speaking a different language at home may face additional challenges in developing and maintaining literacy skills in the language of their host country, especially if they had limited access to high-quality initial education or encounter language barriers in everyday life. The Survey of Adult Skills sheds light on these disparities by distinguishing between groups based on both migration status and the language spoken at home (OECD, 2024[1]). Gaps persist between native-born and foreign-born adults, and are even wider between those who do or do not speak the host country language at home.

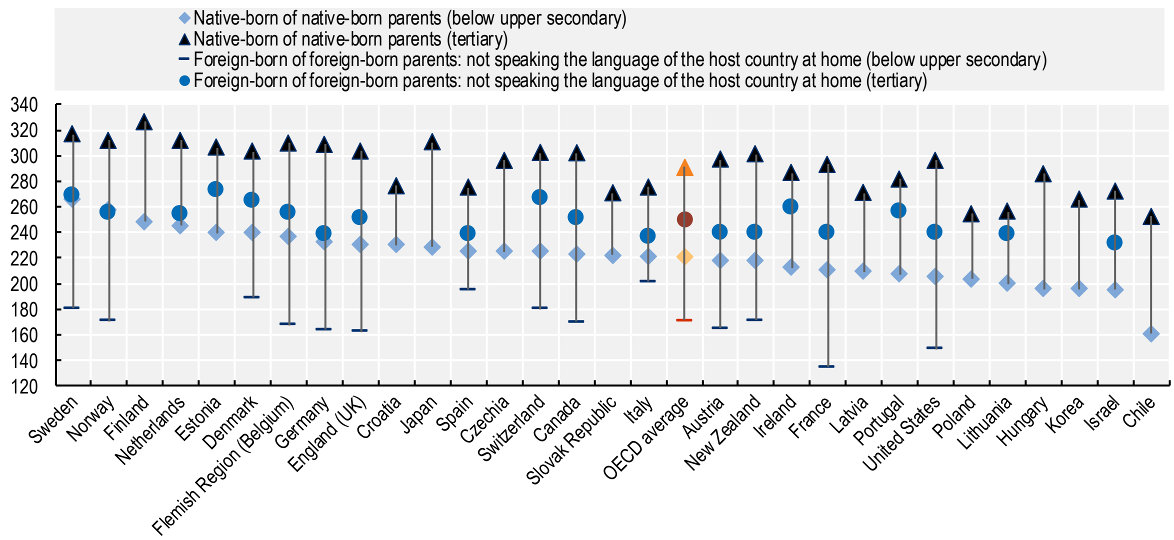
On average across participating OECD countries and economies, native-born adults with native-born parents averaged 266 score points in literacy, while foreign-born adults with foreign-born parents score averaged 247 points if they speak the host country language at home (a 19 point gap) and 229 points if they do not (a 38 point gap). These differences suggest that both language exposure and migration-related barriers (such as interrupted schooling or credential recognition) might contribute or are related to lower proficiency. Countries such as Canada, Ireland, Lithuania, New Zealand and the Slovak Republic show comparatively small gaps between native-born and foreign-born adults, particularly among those who speak the host language at home. In these countries, inclusive education policies and access to adult learning opportunities may help narrow disparities. In contrast, France, Germany and the Flemish Region (Belgium) report much larger gaps, especially for foreign-born adults who do not use the host language at home – often exceeding 70 points (Table 5). However, caution is needed when interpreting these figures, as in some cases estimates may be based on relatively small samples.

The composition of immigrant populations significantly influences literacy outcomes across countries; although inclusive education policies and access to adult learning opportunities are vital, educational backgrounds and language proficiency among migrants also play crucial roles. For instance, Canada's immigration system employs a points-based model that prioritises highly educated individuals with strong language skills. This approach has resulted in a substantial proportion of immigrants possessing university degrees (Parisa Mahboubi, 2024[10]). In contrast, countries like Germany and the Republic of Türkiye have experienced significant influxes of refugees, particularly from Syria, with varied educational backgrounds and who may not speak the host country's language at home. For example, studies show that Syrian refugees in Türkiye have educational distributions similar to those in pre-war Syria, with many having limited formal education (OECD, 2024[11]; Güray Kirdar, Koç and Dayıoğlu, 2023[12]).

On average across OECD countries, the gap in literacy proficiency associated with educational attainment is wider than that associated with migration background. The gap associated with migration background narrows slightly with educational attainment. Among those with tertiary education, the gap between native-born adults with native-born parents and foreign-born adults who do not speak the language of the host country at home is 41 score points, widening to 47 score points among those with upper secondary or post-secondary non-tertiary attainment and 49 points for those with below upper secondary education (Figure 6 and Table 5).

Figure 6. Adults' mean literacy proficiency, by educational attainment, immigrant background and language spoken at home (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in score points



For data, see Table 5. For a link to download the data, see Tables and Notes section.

Definitions

Age groups: Adults refer to 25-64 year-olds. **Younger adults** refer to 25-34 year-olds. **Older adults** refer to 45-54 year-olds.

Educational attainment refers to the highest level of education successfully completed by an individual. See the *Reader's Guide* at the beginning of this publication for a presentation of all ISCED 2011 levels.

Literacy

Literacy in PIAAC Cycle 2 is defined as the ability to access, understand, evaluate and reflect on written texts to achieve one's goals, develop knowledge and potential, and participate in society. This encompasses both traditional print-based texts and digital texts, acknowledging the growing importance of navigating and interpreting information in digital environments. Tasks may involve multiple sources and formats, including continuous (e.g. sentences, paragraphs), non-continuous (e.g. charts, tables) and mixed texts, reflecting a range of genres and contexts.

Numeracy

Numeracy in PIAAC Cycle 2 is accessing, using and reasoning critically with mathematical content, information and ideas represented in multiple ways in order to engage in and manage the mathematical demands of a range of situations in adult life. The assessment covers engagement with mathematical information in both traditional and digital environments, including tasks that require understanding and applying mathematical concepts in real-life contexts. An additional assessment of numeracy components focuses on skills essential for achieving automaticity and fluency in managing mathematical and numerical information.

Adaptive problem solving

Replacing the previous domain of problem solving in technology-rich environments, Cycle 2 introduced adaptive problem solving, defined as the capacity to achieve one's goals in dynamic situations where a solution method is not immediately apparent. This requires engaging in cognitive and metacognitive processes to define the problem, search for information and apply a solution across various information environments and contexts. This broader construct reflects the evolving nature of the problem-solving skills needed in today's complex and digital world.

Proficiency levels

In PIAAC Cycle 2, proficiency in each domain is measured on a continuous scale and categorised into levels to aid interpretation. While the specific score ranges and descriptions for each level are detailed in the official assessment framework, the general structure is as follows (see Tables 2.4, 2.5 and 2.6 in the PIAAC international report for more detailed descriptions (OECD, 2024[1])).

Literacy Proficiency Levels

Below Level 1: Tasks at this level require the respondent to read brief texts on familiar topics and locate a single piece of explicitly stated information. The text structure is simple and the information that needs to be located is identical in form to what is in the question or directive. Only basic vocabulary knowledge is required. There is no need to understand the structure of sentences or make inferences. Texts are short, and there is little competing information.

Level 1: Tasks at this level require the respondent to read relatively short digital or print texts to locate a single piece of explicitly stated information. There is little, if any, competing information. The information in the question or directive is identical to or synonymous with the information in the text. Some tasks may require the respondent to enter personal information onto a document, such as a form. Only basic vocabulary knowledge is required, and the tasks rely mainly on simple matching or locating strategies.

Level 2: At this level, tasks require respondents to make matches between the text and information, including some that may require low-level inferences. Some competing information may be present. The texts may be continuous, non-continuous, or mixed, and the task may require integration of two or more pieces of information. The information may need to be compared or contrasted. There is some use of digital tools and navigation across pages may be necessary.

Level 3: Tasks at this level require the respondent to integrate several pieces of information and to recognize the relationship between different parts of a text, or to evaluate their relevance. There may be a need to perform multi-step operations, compare and contrast or reason about the information. Texts are often dense or lengthy, and multiple distractors are present. Navigation across a variety of digital environments or layout features may be required.

Level 4: Tasks at this level require the respondent to perform multiple-step operations to integrate, interpret, or synthesize information from complex or lengthy texts. The texts may be unfamiliar in topic, with complex structures. Competing information is often present, and a high level of inferencing is necessary. The tasks may require critical evaluation of information and distinguishing relevant from irrelevant content.

Level 5: At this highest level, tasks require the respondent to search for and integrate information across multiple, dense texts; construct syntheses; make high-level inferences or use specialised background knowledge. Texts are complex and lengthy and may contain dense or ambiguous information. Tasks demand a high level of abstraction, logic, and reasoning, and often require evaluating the reliability of different sources or resolving conflicting pieces of information.

Numeracy Proficiency Levels

Below Level 1: Tasks at this level require the respondent to carry out simple processes such as counting, sorting, performing basic arithmetic operations with whole numbers or understanding simple percentages, such as 50%. Tasks are based on concrete, familiar contexts where the mathematical content is highly accessible. No interpretation of text is required. Instructions and numerical information are straightforward and require minimal inference or problem structuring.

Level 1: Tasks at this level involve basic mathematical content such as quantities and money, time, or simple measurements. Respondents may be required to perform simple one-step operations such as arithmetic with whole numbers or percentages in concrete contexts. The mathematical information is explicitly presented, and the tasks require little or no text interpretation or complex reasoning.

Level 2: Tasks at this level require the application of two or more steps and may involve calculation with decimals, percentages, and fractions. Respondents may need to interpret simple data representations such as tables or graphs and understand proportional relationships. The contexts are more varied and may be less familiar. Tasks may involve some reasoning and choosing appropriate arithmetic operations.

Level 3: Tasks at this level require respondents to understand and work with mathematical information that may be embedded in less familiar contexts. They often require several steps and involve problem-solving, proportional reasoning, or working with simple algebraic formulas. Respondents must interpret and evaluate data from various sources and use appropriate strategies to identify relevant mathematical processes.

Level 4: Tasks at this level involve understanding a broad range of mathematical information, including formal and abstract mathematical representations. Respondents may be required to integrate multiple sources of data, make inferences based on quantitative evidence, or solve problems in unfamiliar contexts. Tasks demand reasoning, analysis, and the ability to select and apply appropriate strategies flexibly.

Level 5: At this level, tasks require the respondent to conceptualise, evaluate and apply mathematical or statistical information in complex and abstract settings. Problems may be highly unfamiliar and require the use of sophisticated reasoning strategies and advanced quantitative tools. Tasks often involve modelling, structuring, and critically assessing real-world problems using formal mathematics.

Adaptive Problem-Solving

Below Level 1: Tasks at this level require carrying out simple, routine procedures in highly familiar contexts. The problem to be solved is immediately apparent and involves no unexpected developments or need for goal setting. Success can be achieved through straightforward recognition and recall, with minimal need to adjust responses or monitor progress. The environment is predictable, and only a single action or step is typically necessary.

Level 1: Tasks require executing a short sequence of steps in response to a clearly defined and concrete problem. Situations are familiar, interfaces are standard, and the necessary knowledge is commonly held. There may be some need to identify relevant options or perform simple adjustments, but no significant reasoning or re-planning is needed. Respondents succeed by applying familiar strategies or known procedures with limited need for adaptation.

Level 2: Tasks involve resolving problems in somewhat unfamiliar situations. Respondents need to interpret the problem context, plan steps, and monitor progress. Situations may involve partial or evolving information, moderate amounts of irrelevant or distracting information, and the need to choose among alternatives. Success depends on adaptive reasoning–identifying what is relevant, discarding what is not, and adjusting strategies mid-process.

Level 3: Tasks involve multiple steps, ambiguous goals, or constraints that emerge during the task. Respondents must evaluate options, deal with unexpected information or outcomes, and show flexibility in problem-solving. Success requires coordinated use of planning, reasoning, and monitoring, as well as learning from feedback. Respondents are required to manage cognitive complexity and demonstrate self-regulation in dynamic situations.

Level 4: Tasks involve solving complex problems in unfamiliar and evolving situations with competing goals and multiple constraints. Respondents must independently set objectives, plan multi-step strategies, evaluate the relevance and reliability of information, and adjust their approach based on feedback or new conditions. High-level reasoning, abstraction, and critical thinking are essential. These tasks reflect sophisticated real-life problem-solving skills under uncertainty and require sustained cognitive effort and decision-making autonomy.

Methodology

The Survey of Adult Skills, part of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), evaluated the skills of adults aged 16 to 65 in three key areas: literacy, numeracy and adaptive problem solving. These competencies are essential for navigating social contexts, succeeding in the labour market, engaging in education and training, and participating fully in civic life.

In addition to assessing skills, the survey gathered detailed background information on respondents, including their education, employment history and various outcomes such as health status. It also collected data on how frequently adults engage in literacy and numeracy tasks, their use of digital technologies at work and in daily life, and the importance of transversal skills such as collaboration and time management in their jobs. Respondents were also asked whether their qualifications and skills matched their job requirements and if they had autonomy in key aspects of their work.

The assessment was primarily conducted via computer, although respondents with little or no computer experience were offered a paper-based version. The test was administered in the official language(s) of each country or, in some cases, a widely spoken minority language.

Twenty-seven countries and economies participated in both cycles of the survey. While only one round of the second cycle has been conducted so far (in 2022/23), the first cycle was carried out in three rounds: Round 1 in 2011/12, Round 2 in 2014/15 and Round 3 in 2017. As different countries participated in the three rounds, the amount of time that has elapsed between the two data collections is not the same for all countries and economies. The majority of them (21 out of 27) participated in Round 1 of the first cycle, 11 years before the second cycle. For this reason, this chapter often refers to changes that occurred "over the past decade", for ease of exposition. Five countries participated in Round 2 of Cycle 1, eight years before the second cycle. Hungary participated in Round 3 of Cycle 1, only six years before the second cycle (the United States also participated in Round 3). Because of these differences, the size of the change in proficiency between the cycles is not comparable across the participants in the different rounds of the first cycle. All the figures in this chapter, therefore, group countries and economies according to when they participated in the first cycle, and no results are given for the average across OECD countries.

The international report of the 2023 Survey of Adult Skills analyses skills more comprehensively also focusing on a larger age range covering the population aged 16-65, while this Chapter mainly refers to adults aged 25 to 64. In addition, Cycle 2 of the Survey of Adult Skills includes data from doorstep interviews to evaluate language barriers in on order to administer the questionnaires: data from doorstep interviews are often included in Education at a Glance tables, except when this was not possible due to methodology (for example, in tables comparing Cycle 1 and Cycle 2). Notes under each table specify whether data from the doorstep interviews are included.

More information on sampling and methodology is available in the Technical Report of the Survey of Adult Skills (OECD (forthcoming)[9]).

For further details, refer to the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018) and the *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Source

Data on proficiency levels and mean scores are based on the Survey of Adult Skills (PIAAC) (2012-15 and 2023). PIAAC is the OECD Programme for the International Assessment of Adult Competencies.

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Tables and Notes

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StatLink https://stat.link/m8lu47

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

Data cut-off for the print publication 13 June 2025.

Notes for Tables

Table 1. Adults' mean literacy proficiency, by educational attainment level and gender (2023)

Note: Includes adults who were only administered the doorstep interview due to a language barrier. Columns showing data for all levels of education is available for consultation on line.

Table 2. Distribution of adults by literacy proficiency levels, by educational attainment and gender (2023)

Note: Includes adults who were only administered the doorstep interview due to a language barrier. Columns showing data for men and women, and for all levels of education are available for consultation on line.

Table 3. Adults' mean literacy proficiency, by educational attainment and age group (2023)

Note: Includes adults who were only administered the doorstep interview due to a language barrier. Columns showing data for 35-44 and 55-64 year-olds, and for all levels of education are available for consultation on line.

Table 4. Distribution of adults by literacy proficiency levels, by educational attainment and age group (2023)

Note: Includes adults who were only administered the doorstep interview due to a language barrier. Columns showing data for 35-44, 45-54 and 55-64 year-olds, and for all levels of education are available for consultation on line.

Table 5. Adults' mean literacy proficiency, by educational attainment, immigrant background and language spoken at home (2023)

Note: Includes adults who were only administered the doorstep interview due to a language barrier. Columns showing data for native-born of foreign-born parents and for all levels of education are available for consultation on line.

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table 1. Adults' mean literacy proficiency, by educational attainment level and gender (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in score points

	Below upper secondary						Upper secondary or post-secondary non-tertiary						Tertiary					
	Men		Women		Total		Men		Women		Total		Men		Women		Total	
	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.
OECD countries	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Austria	195	(4.6)	194	(3.7)	195	(2.8)	240	(2.6)	246	(2.2)	243	(1.7)	286	(2.5)	285	(2.1)	285	(1.7)
Canada	207	(5.8)	207	(6.7)	207	(3.9)	261	(2.2)	259	(2.3)	260	(1.7)	288	(2.1)	286	(1.6)	287	(1.2)
Chile	158	(3.9)	166	(2.6)	162	(2.5)	210	(2.9)	211	(2.8)	210	(2.1)	254	(3.3)	245	(2.0)	249	(2.3)
Czechia	192	(10.4)	208	(6.8)	201	(6.0)	252	(2.0)	252	(1.5)	252	(1.2)	293	(4.1)	287	(2.9)	290	(2.5)
Denmark	217	(4.4)	216	(4.0)	217	(3.2)	265	(2.2)	265	(3.0)	265	(1.7)	297	(1.8)	291	(1.2)	293	(1.0)
Estonia	234	(3.9)	231	(3.9)	233	(2.8)	257	(1.6)	257	(1.7)	257	(1.3)	292	(1.9)	296	(1.1)	294	(.9)
Finland	227	(8.5)	219	(9.1)	224	(6.1)	290	(2.3)	288	(2.6)	289	(1.7)	311	(3.1)	316	(2.1)	314	(1.9)
France	193	(3.3)	191	(3.6)	192	(2.3)	238	(1.4)	243	(1.6)	240	(.9)	290	(1.4)	285	(1.3)	287	(1.0)
Germany	187	(4.9)	197	(5.0)	192	(3.0)	254	(1.9)	264	(1.7)	259	(1.3)	293	(2.1)	296	(1.7)	294	(1.4)
Hungary	192	(3.7)	195	(3.5)	194	(2.6)	235	(1.7)	239	(1.5)	237	(1.2)	285	(2.2)	282	(1.7)	283	(1.4)
Ireland	210	(4.4)	209	(6.1)	210	(3.6)	252	(2.9)	249	(2.4)	250	(2.1)	281	(2.0)	281	(1.7)	281	(1.2)
Israel	196	(4.8)	182	(4.4)	191	(3.8)	224	(2.8)	227	(2.6)	226	(2.1)	265	(2.5)	262	(1.7)	263	(1.5)
Italy	217	(2.7)	217	(3.0)	217	(2.2)	252	(2.7)	253	(2.3)	252	(2.1)	272	(3.8)	271	(3.0)	271	(2.4)
Japan	223	(5.8)	217	(9.4)	221	(5.4)	272	(2.2)	278	(1.9)	275	(1.3)	314	(1.4)	304	(1.2)	309	(.9)
Korea	193	(4.6)	192	(3.3)	193	(2.8)	233	(1.8)	227	(1.9)	230	(1.4)	262	(1.4)	267	(1.5)	264	(1.0)
Latvia	199	(5.1)	211	(4.3)	205	(3.3)	233	(1.9)	229	(2.1)	231	(1.3)	274	(2.3)	269	(1.7)	271	(1.5)
Lithuania	201	(4.9)	210	(4.9)	204	(4.0)	226	(2.2)	227	(1.6)	226	(1.4)	258	(2.5)	254	(1.5)	256	(1.4)
Netherlands	225	(4.8)	230	(4.3)	227	(3.1)	273	(2.8)	275	(2.4)	274	(1.8)	300	(2.3)	299	(2.3)	299	(1.6)
New Zealand	195	(7.6)	220	(4.9)	207	(4.9)	251	(6.5)	259	(4.0)	255	(4.1)	280	(4.3)	286	(3.4)	283	(2.6)
Norway	221	(6.3)	229	(5.9)	225	(4.2)	264	(2.3)	266	(2.8)	264	(2.0)	302	(1.9)	298	(1.5)	300	(1.3)
Poland	204	(4.1)	200	(5.4)	203	(3.4)	228	(1.8)	229	(1.5)	228	(1.4)	255	(2.9)	255	(2.2)	255	(1.9)
Portugal	204	(4.1)	199	(3.1)	202	(3.1)	246	(2.6)	234	(2.3)	240	(1.8)	272	(4.0)	271	(2.2)	272	(2.0)
Slovak Republic	215	(4.6)	223	(4.0)	219	(3.2)	255	(1.8)	251	(1.4)	253	(1.3)	269	(3.0)	270	(2.4)	270	(1.9)
Spain	218	(2.0)	218	(2.0)	218	(1.6)	246	(2.4)	242	(2.4)	244	(1.7)	276	(1.7)	268	(1.6)	271	(1.2)
Sweden	243	(6.8)	236	(9.2)	240	(5.5)	286	(2.3)	280	(2.6)	283	(1.8)	303	(2.3)	299	(2.1)	300	(1.7)
Switzerland	185	(5.6)	191	(4.4)	188	(3.6)	256	(2.1)	258	(1.9)	257	(1.4)	291	(1.5)	288	(1.8)	289	(1.1)
United States	180	(7.2)	188	(5.0)	183	(4.8)	240	(3.4)	241	(3.1)	240	(2.3)	289	(3.3)	284	(3.1)	287	(2.3)
Other participants																		
England (UK)	225	(5.2)	213	(5.9)	219	(3.8)	265	(2.8)	258	(2.5)	262	(1.9)	291	(2.3)	291	(2.1)	291	(1.7)
Flemish Region (Belgium)	225	(5.0)	208	(4.6)	217	(3.3)	263	(2.2)	254	(2.3)	259	(1.7)	302	(2.3)	297	(1.6)	299	(1.3)
OECD average	206		207		207		251		250		250		284		282		283	
Partner and/or accession countries																		
Croatia	221	(4.3)	230	(4.0)	226	(3.3)	247	(1.9)	252	(2.3)	249	(1.8)	271	(4.0)	275	(3.4)	273	(3.2)

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table 2. Distribution of adults by literacy proficiency levels, by educational attainment and gender (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in per cent

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	Level 1 and below	Level 2	Level 3	Level 4/5	Level 1 and below	Level 2	Level 3	Level 4/5	Level 1 and below	Level 2	Level 3	Level 4/5
OECD countries	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)
Austria	71	22	6	1	33	41	24	3	12	24	43	20
Canada	60	31	9	0	23	35	34	7	12	24	42	21
Chile	92	7	1	c	62	29	8	0	30	42	25	4
Czechia	65	24	9	1	29	39	27	5	9	23	46	22
Denmark	53	28	17	1	18	37	37	8	8	20	48	24
Estonia	44	31	21	3	29	31	30	9	11	21	40	28
Finland	49	22	19	10	12	24	38	26	8	9	36	47
France	70	23	6	1	36	40	22	3	8	27	47	17
Germany	68	20	11	1	24	36	33	7	9	20	43	27
Hungary	74	24	2	0	39	42	17	2	9	31	46	14
Ireland	62	32	6	0	26	47	24	3	9	34	43	14
Israel	73	21	5	0	49	32	16	3	23	33	34	11
Italy	58	30	11	1	27	41	27	5	17	36	36	12
Japan	49	31	18	2	13	33	41	13	4	15	47	35
Korea	74	24	2	0	45	39	14	1	19	39	35	8
Latvia	67	25	7	0	46	36	15	3	16	36	38	10
Lithuania	69	27	4	0	48	42	10	0	22	47	27	4
Netherlands	45	34	19	2	14	32	44	11	8	17	45	30
New Zealand	59	28	12	2	26	36	30	8	13	27	39	21
Norway	46	27	23	4	21	33	37	10	7	17	46	30
Poland	65	31	5	0	45	39	14	1	24	42	28	6
Portugal	70	26	4	0	35	44	20	1	15	34	41	11
Slovak Republic	56	34	10	0	22	49	27	2	13	40	40	7
Spain	55	36	9	0	32	44	21	2	13	41	38	9
Sweden	34	33	28	5	9	29	47	15	7	18	45	30
Switzerland	74	19	6	1	25	35	34	7	10	23	43	24
United States	75	17	6	2	35	36	23	6	13	23	40	23
Other participants												
England (UK)	50	37	13	1	21	38	33	8	9	24	44	23
Flemish Region (Belgium)	55	27	15	3	23	37	32	8	8	17	46	30
OECD average	61	27	11	2	30	37	27	6	13	28	40	19
Partner and/or accession countries												
Croatia	49	37	12	2	30	39	25	5	16	33	37	15

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table 3. Adults' mean literacy proficiency, by educational attainment and age group (2023)

Survey of Adult Skills (PIAAC); in score points

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	25-34 year-olds		45-54 year-olds		25-34 year-olds		45-54 year-olds		25-34 year-olds		45-54 year-olds	
	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.	Score	S.E.
OECD countries	(1)		(3)		(5)		(7)		(9)		(11)	
Austria	208	(8.8)	192	(6.5)	259	(3.3)	242	(3.1)	296	(3.1)	286	(2.9)
Canada	225	(9.8)	205	(7.5)	275	(3.2)	255	(4.6)	295	(2.2)	286	(2.8)
Chile	184	(7.1)	162	(4.1)	225	(3.3)	201	(3.5)	261	(3.1)	244	(4.2)
Czechia	210	(14.8)	205	(11.7)	260	(2.9)	252	(2.1)	296	(5.2)	294	(3.5)
Denmark	222	(6.2)	216	(7.4)	282	(3.3)	263	(2.6)	303	(2.1)	293	(2.0)
Estonia	264	(4.2)	220	(4.4)	289	(2.5)	250	(2.2)	318	(2.1)	288	(1.8)
Finland	246	(14.9)	215	(16.9)	313	(3.6)	292	(4.0)	320	(4.8)	314	(3.1)
France	213	(7.3)	187	(4.4)	255	(3.0)	236	(1.9)	295	(2.1)	284	(1.7)
Germany	203	(7.0)	178	(7.2)	273	(3.1)	254	(2.7)	303	(3.1)	297	(3.0)
Hungary	197	(5.3)	192	(4.1)	246	(2.7)	240	(1.7)	290	(2.7)	280	(2.5)
Ireland	c		218	(6.4)	251	(4.6)	246	(3.9)	283	(2.8)	280	(2.4)
Israel	221	(7.0)	183	(6.1)	244	(3.2)	214	(3.2)	269	(2.7)	263	(3.2)
Italy	224	(5.5)	217	(3.5)	256	(3.4)	253	(3.3)	274	(4.4)	271	(3.8)
Japan	c		219	(9.7)	284	(3.6)	276	(2.4)	317	(1.9)	308	(1.6)
Korea	c		204	(6.9)	256	(4.7)	230	(2.1)	279	(2.2)	258	(1.8)
Latvia	216	(8.0)	206	(5.2)	250	(3.5)	230	(3.1)	287	(3.2)	265	(2.8)
Lithuania	219	(7.4)	201	(6.0)	242	(2.6)	224	(2.0)	266	(2.1)	252	(2.7)
Netherlands	234	(8.8)	229	(6.6)	282	(3.9)	279	(2.9)	306	(3.6)	301	(2.7)
New Zealand	205	(8.3)	209	(8.0)	251	(9.2)	261	(5.8)	282	(6.2)	284	(7.0)
Norway	236	(10.4)	214	(10.9)	274	(3.9)	266	(3.7)	306	(2.7)	298	(2.5)
Poland	208	(8.1)	214	(5.2)	236	(2.3)	233	(2.5)	259	(3.2)	253	(3.7)
Portugal	206	(6.6)	203	(4.5)	240	(4.0)	243	(3.1)	277	(3.6)	271	(5.1)
Slovak Republic	204	(6.4)	224	(7.7)	249	(2.6)	257	(2.2)	272	(2.9)	269	(3.9)
Spain	220	(3.7)	220	(2.8)	246	(3.5)	246	(3.4)	276	(2.3)	270	(2.0)
Sweden	233	(17.6)	250	(9.6)	287	(3.1)	281	(3.3)	303	(3.7)	299	(2.4)
Switzerland	201	(12.1)	183	(6.1)	273	(2.7)	257	(2.7)	301	(2.4)	285	(2.5)
United States	198	(13.7)	180	(9.0)	246	(4.0)	241	(5.1)	292	(3.9)	286	(4.6)
Other participants												
England (UK)	235	(7.1)	212	(8.9)	272	(3.7)	254	(3.5)	300	(2.4)	285	(3.8)
Flemish Region (Belgium)	222	(8.5)	213	(7.4)	274	(3.7)	251	(3.6)	306	(2.6)	292	(2.6)
OECD average	217		206		262		249		291		281	
Partner and/or accession countries												
Croatia	234	(8.5)	225	(5.3)	256	(2.9)	250	(3.0)	277	(3.6)	275	(4.3)

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table 4. Distribution of adults by literacy proficiency levels, by educational attainment and age group (2023)

Survey of Adult Skills (PIAAC); in per cent

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	Level 1 and below	Level 2	Level 3	Level 4/5	Level 1 and below	Level 2	Level 3	Level 4/5	Level 1 and below	Level 2	Level 3	Level 4/5
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Austria	61	23	14	2	20	42	32	6	9	18	45	28
Canada	50	30	18	2	11	37	42	10	8	22	44	26
Chile	80	18	2	c	47	37	14	1	19	44	32	6
Czechia	59	22	15	4	24	35	32	10	9	17	45	29
Denmark	46	35	17	2	10	29	45	16	7	13	46	34
Estonia	c	35	41	c	10	25	45	20	c	10	39	46
Finland	34	14	33	19	6	12	37	45	11	4	26	59
France	53	34	12	1	22	43	31	4	5	24	48	23
Germany	58	22	19	1	18	29	39	14	8	16	40	36
Hungary	71	25	3	1	31	43	22	4	7	27	47	19
Ireland	c	c	c	c	24	51	20	5	8	33	45	14
Israel	50	35	13	1	36	31	26	7	19	33	37	11
Italy	49	32	c	c	28	35	31	c	16	34	37	c
Japan	c	c	c	c	8	28	46	18	2	11	46	42
Korea	c	c	c	c	22	40	33	5	12	32	43	14
Latvia	58	29	12	1	31	38	25	7	9	27	47	16
Lithuania	55	35	8	1	30	51	18	1	14	47	33	6
Netherlands	41	29	25	4	11	26	48	15	9	9	43	39
New Zealand	64	24	11	2	28	35	27	10	15	25	38	22
Norway	36	28	29	8	18	27	42	14	6	12	47	34
Poland	60	32	8	c	39	42	16	2	22	41	30	8
Portugal	61	32	7	c	35	43	21	2	15	26	44	14
Slovak Republic	68	26	6	c	26	49	23	2	10	43	41	6
Spain	54	34	11	1	29	47	21	3	10	39	42	10
Sweden	c	21	26	9	9	27	47	17	7	15	42	35
Switzerland	58	27	10	4	15	31	44	10	7	16	44	32
United States	66	24	7	3	34	33	25	8	11	19	44	26
Other participants												
England (UK)	38	42	18	2	13	38	37	12	6	19	47	28
Flemish Region (Belgium)	48	30	20	2	16	32	39	13	6	13	46	35
OECD average	55	28	15	3	23	36	32	10	10	24	42	25
Partner and/or accession countries												
Croatia	36	47	16	1	25	41	27	7	13	33	38	16

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table 5. Adults' mean literacy proficiency, by educational attainment, immigrant background and language spoken at home (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in score points

	Below upper secondary			Upper secondary or post-secondary non-tertiary			Tertiary		
		Foreign-born of foreign-born parents			Foreign-born of foreign-born parents			Foreign-born of foreign-born parents	
	Native-born of native-born parents	Speaking host country language at home	Not speaking host country language at home	Native-born of native-born parents	Speaking host country language at home	Not speaking host country language at home	Native-born of native-born parents	Speaking host country language at home	Not speaking host country language at home
OECD countries	(1)	(3)	(4)	(5)	(7)	(8)	(9)	(11)	(12)
Austria	218	196	165	252	238	196	297	281	240
Canada	223	c	170	266	257	220	302	288	251
Chile	161	176	c	212	188	c	252	230	c
Czechia	225	c	c	254	239	c	296	275	c
Denmark	239	190	189	274	242	217	303	280	265
Estonia	240	c	c	264	235	c	306	269	273
Finland	249	c	c	296	c	c	326	c	c
France	211	180	135	246	204	175	293	262	240
Germany	232	189	164	270	241	195	309	276	239
Hungary	196	c	c	238	227	c	286	279	c
Ireland	212	c	c	253	257	226	287	280	260
Israel	195	184	c	228	230	190	272	253	231
Italy	221	219	202	256	236	221	275	245	237
Japan	229	c	c	277	c	c	310	c	c
Korea	196	c	c	233	189	c	266	c	c
Latvia	209	c	c	233	229	c	271	272	c
Lithuania	200	c	c	226	c	217	256	c	239
Netherlands	245	c	c	284	238	239	312	289	255
New Zealand	218	207	171	263	254	208	301	286	240
Norway	258	c	171	277	234	224	312	279	255
Poland	203	c	c	229	c	c	255	c	c
Portugal	207	193	c	247	229	c	282	257	257
Slovak Republic	222	c	c	253	c	c	271	c	c
Spain	225	203	195	252	224	223	275	259	238
Sweden	266	c	181	293	258	232	317	286	269
Switzerland	225	192	180	269	247	206	302	289	266
United States	205	c	149	251	226	181	296	276	240
Other participants									
England (UK)	230	204	162	270	245	198	303	282	252
Flemish Region (Belgium)	237	206	167	269	244	201	310	280	255
OECD average	221	195	171	256	234	209	291	273	250
Partner and/or accession countries									
Croatia	230	221	c	250	243	c	277	260	c

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Part A. The output of educational institutions and the impact of learning

Chapter A1. To what level have adults studied?

Highlights

- Although some countries have achieved near universal upper secondary attainment among 25-34 year-olds, on average, 13% of younger adults in OECD countries still lack an upper secondary qualification. Across OECD and partner countries, the rate is especially high in Costa Rica, India, Indonesia, Mexico, Peru and South Africa where more than one in three 25-34 year-olds have not attained upper secondary education.
- Parental education remains a strong determinant of young adults' educational attainment. Across OECD countries, 25-34 year-olds whose parents have a tertiary qualification are significantly more likely to obtain a tertiary degree themselves (70%) than those whose parents did not complete upper secondary education (26%).
- Although a master's degree is associated with significantly improved earnings and employment prospects, the prevalence of master's attainment among 25-34 year-olds with tertiary qualifications varies widely across OECD and partner countries, ranging from 4% in Brazil to 83% in the Slovak Republic.

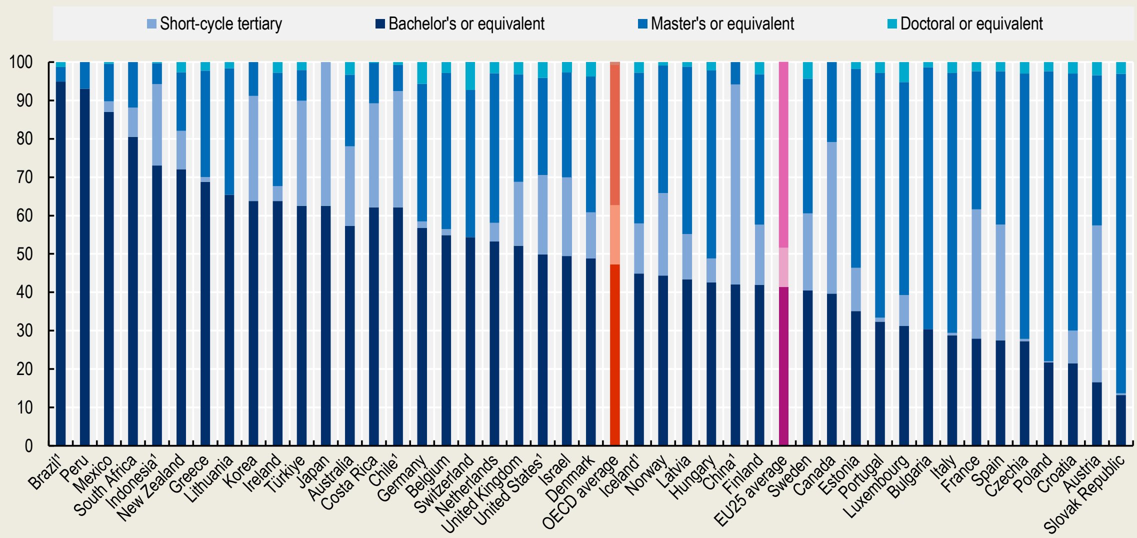
Context

Educational attainment plays a pivotal role in democratic societies and the labour market. It is often used as a key indicator of human capital. Higher levels of educational attainment are strongly linked to increased employment rates (see Chapter A3) and a more skilled labour force. It is also associated with higher earnings (see Chapter A4) and better health (see Chapter A6).

Over the past several decades, tertiary attainment has increased across most OECD countries. Individuals with tertiary qualifications generally achieve higher employment rates and earn better wages than those with lower educational levels. Even within tertiary education, this trend still holds: individuals with a master's degree or equivalent typically earn more and face lower unemployment rates than those with only a bachelor's degree or equivalent.

To enhance the educational attainment of their populations, governments in OECD countries have implemented various policies aimed at retaining individuals within the education system and equipping them with the skills demanded by the labour market (OECD, 2018[1]). However, the growing prevalence of non-formal and informal education has introduced alternative pathways for adults to acquire these skills in non-traditional settings (see Chapter A5).

Figure A1.1. Distribution of tertiary attainment levels among tertiary-educated 25-64 year-olds (2024)



1. Year of reference differs from 2024.

For data, see Table A1.1. For a link to download the data, see Tables and Notes section.

Other findings

Upward educational mobility is considerably more widespread than downward mobility. Among 25-34 year-olds whose parents attained upper secondary education, 44% have attained tertiary education on average across OECD countries, while just 8% did not complete upper secondary.

- There are large differences in the prevalence of different fields of study among adults (25-64 year-olds) with tertiary attainment in OECD countries. Across the OECD on average, 26% of tertiary-educated adults had studied science, technology, engineering and mathematics (STEM), the most prevalent field of study.
- On average across OECD countries, the most common level of tertiary attainment for both women and men aged 25–34 is a bachelor's degree, held by 29% of women and 22% of men. A smaller share has completed a master's degree (19% of women and 13% of men), while only 1% of young adults have earned a doctorate, regardless of gender.

Analysis

Educational attainment has steadily increased over recent decades across all OECD countries. Younger generations generally exhibit higher levels of educational attainment, and women have long surpassed men in tertiary attainment on average across OECD countries.

Not only is tertiary education associated with higher employment rates, better wages and better health, but within this level, master's and doctoral degrees generally offer even greater employment prospects and earnings, although outcomes vary by field of study. Notably, significant gender imbalances persist, with women often concentrated in fields that tend to yield lower wages and employment rates compared to male-dominated disciplines (see Chapters A3 and A4).

While labour force surveys are invaluable for cross-country comparisons, their design choices—such as the languages in which interviews are conducted—can affect which populations are actually represented in the data. This, in turn, has implications for how accurately educational attainment levels reflect the true composition of the population. Box A1.1 explores how linguistic accessibility in national LFS affects data coverage, highlighting why this aspect is important when interpreting attainment data for policymaking.

Tertiary education attainment

Among tertiary-educated 25-64 year-olds, the most common level of educational attainment is a bachelor's or equivalent degree, with about 48% of this population having a bachelor's as their highest level of education. This is followed by master's attainment, with around 35% of tertiary-educated adults holding this degree as their highest qualification. In contrast, only a small percentage – 3% – of them has attained a doctorate. Similarly, a relatively low proportion holds short-cycle tertiary qualifications as their highest educational attainment – 17% (Table A1.1).

While a relatively low proportion of tertiary-educated 25-64 year-olds holds short-cycle tertiary qualifications as their highest educational attainment, there is an exception worth pointing out. In Canada, over one fourth hold short-cycle tertiary qualifications as their highest educational attainment. Also, the proportion that holds short-cycle tertiary attainment matches or exceeds the proportion that holds bachelor's attainment in Austria, France, Spain and China (Table A1.1).

This pattern of attainment reflects the labour market's demand for highly skilled workers, with bachelor's and master's degrees often serving as key pathways to employment in knowledge-intensive sectors. However, the lower share of doctoral graduates suggests that although advanced research skills are valued, they remain a niche qualification pursued by a smaller segment of the population (OECD, 2019[2]).

The share of 25-34 year-olds with tertiary attainment has increased between 2019 and 2024 in almost all OECD and partner countries with available data for both years. The OECD average has increased by 3 percentage points, from 45% in 2019 to 48% in 2024. In Ireland, Luxembourg and Norway, the increase is 10 percentage points or more, while Romania, the Slovak Republic, South Africa and Switzerland experience a decline of at least 2 percentage points (The gender gap is also widening: 55% of 25-34 year-old women across the OECD have a tertiary degree, compared to 42% of men, a difference which has slightly increased between 2019 and 2024. Estonia is the only country with comparable data for both 2019 and 2024 where the gender gap has narrowed by at least 5 percentage points over this period (Table A1.2).

Looking at longer trends in tertiary attainment, between 2000 and 2021 the average rate of tertiary education among young adults in OECD countries increased steadily by about 1 percentage point per year. However, since 2021, this growth has slowed considerably, with the average annual increase dropping to just 0.3 percentage points. This slowdown underscores ongoing challenges related to unequal access to higher education. On average, only 26% of young adults whose parents did not complete upper secondary education hold a tertiary qualification, compared to 70% of those with at least one parent who attained tertiary education. These disparities highlight persistent barriers that continue to limit educational opportunities for learners from disadvantaged backgrounds, despite overall progress in tertiary attainment.

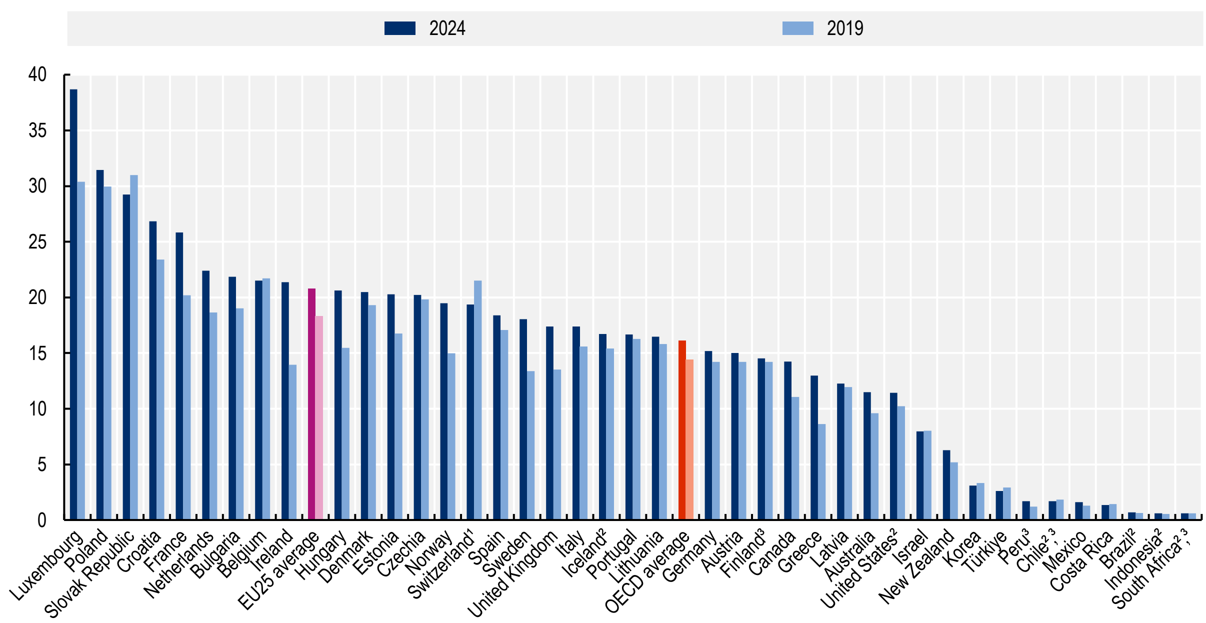
Master's attainment

Just as the share of 25-34 year-olds with tertiary education has increased in recent years, so has the proportion of those whose highest attainment is a master's degree. Although the difference between 2019 and 2024 is not significant in most countries, in Ireland and Luxembourg the share increased by at least 7 percentage points during this period. However, in the Slovak Republic and Switzerland, the share of young adults attaining a master's degree declined by 2 percentage points over the past five years (Figure A1.2).

Master's programmes vary across OECD countries, reflecting different educational systems and labour-market needs. One approach is the long first degree, where the undergraduate and graduate stages are integrated into a single, extended programme. A second approach is where students first attain a bachelor's degree before completing their initial education with a master's degree, a model widely adopted in many OECD countries, including those aligned with the Bologna Process. In this model, the master's programme typically lasts 1-2 years and prepares graduates for both professional practice and research careers. A third approach is the master's as lifelong learning, where individuals pursue postgraduate education after gaining work experience, often in flexible formats such as part-time or online programmes. This model is prevalent in programmes like the Master of Business Administration (Executive MBA) and allows professionals to reskill or advance their careers. These different approaches highlight the diverse purposes of master's degrees, from early career development to ongoing professional growth, and their increasing role in adapting to changing labour-market demands (OECD, 2023[3]).

Figure A1.2. Trends in the share of 25-34 year-olds with a master's or equivalent degree (2019 and 2024)

In per cent



1. Break in time series between 2019 and 2024.
2. Year of reference differs from 2024.
3. Year of reference differs from 2019.
For data, see Table A1.2. For a link to download the data, see Tables and Notes section.

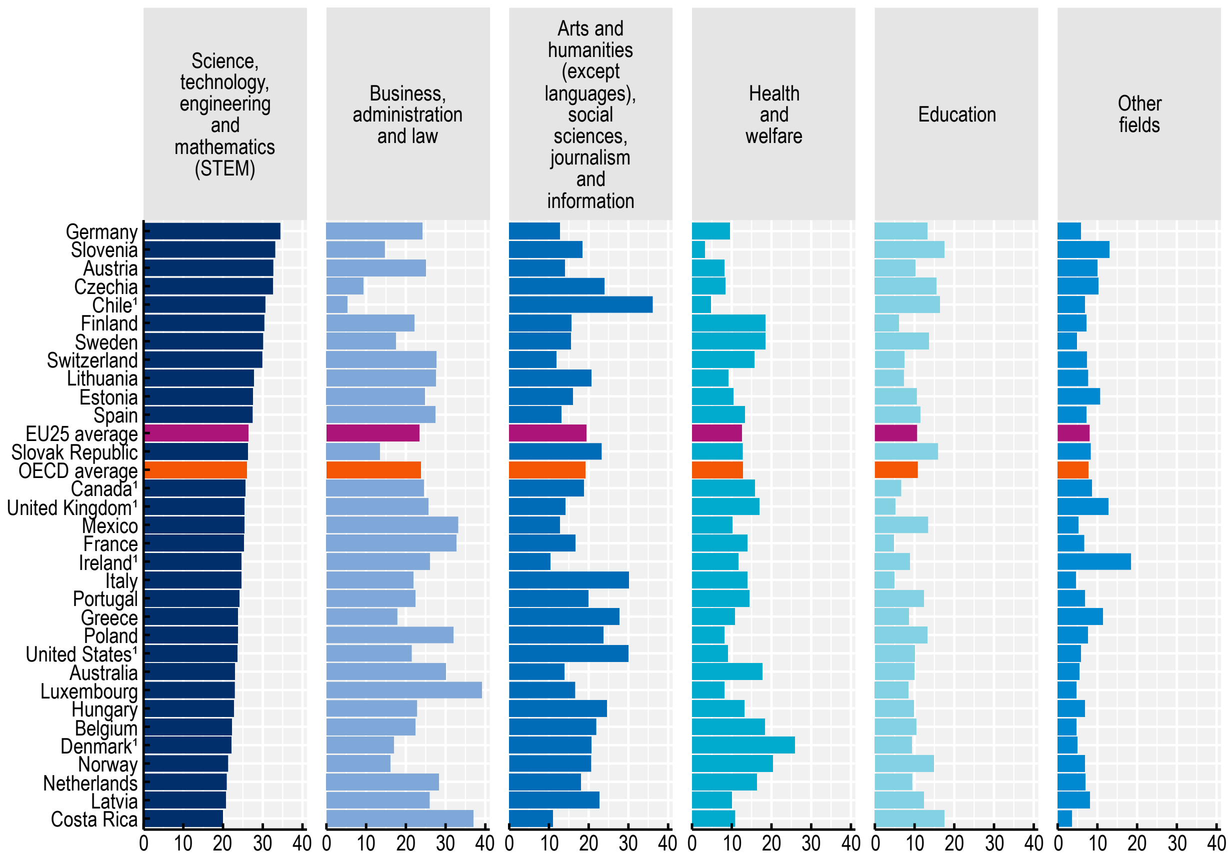
Fields of study

Individuals typically pursue tertiary education in order to enter a specific career or sector and to acquire the skills they need for their desired job. Breaking down tertiary attainment by field of study shows the variation across OECD countries, with some fields being more popular than others (Figure A1.3). The most popular broad field overall is science, technology, engineering and mathematics (STEM), but in 9 OECD countries, business, administration and law remains the most common broad field. Traditional gender roles have also influenced the choice of field of study, and certain fields have traditionally attracted more students from one gender than from the other. In most countries, women dominate in health and welfare but are under-represented in the broad field of science, technology, engineering and mathematics (STEM) (Table A1.3).

In an evolving job market, STEM fields are particularly valued due to the high demand for the skills they provide, both in traditional industries and emerging sectors. STEM graduates typically see stronger labour-market and earnings outcomes than their peers who studied other fields, highlighting the economic advantages of expanding access to STEM education (see Chapter A3). Across OECD countries, 26% of tertiary-educated individuals are STEM graduates, on average. However, the popularity of these fields varies by country, influenced by factors such as national industrial needs, education policies and student preferences. In Germany, this share reaches 34% (Table A1.3). This pattern highlights the increasing importance of STEM-related technical and analytical skills in the labour market, as well as the role of STEM education in driving innovation and economic growth.

Figure A1.3. Field of study among 25-64 year-old tertiary-educated adults (2024)

Percentage of adults with tertiary attainment



1. Year of reference differs from 2024.
For data, see Table A1.3. For a link to download the data, see Tables and Notes section.

Upper secondary or post-secondary non-tertiary attainment

Upper secondary attainment can lead to attractive career opportunities, particularly in countries with strong vocational education and training (VET) systems. In these countries, completing upper secondary education often results in a clear path to well-paying, skilled jobs in sectors like manufacturing, technology and services. However, in countries without robust vocational pathways, the same level of education may not offer the same career prospects, which can influence overall attainment levels. This disparity in career outcomes contributes to varying upper secondary completion rates across OECD countries.

On average across OECD countries, 40% of adults (25-64 year-olds) have an upper secondary or post-secondary non-tertiary qualification as their highest level of education. However, OECD countries show very different shares of adults with this level of attainment: it is below 25% in Costa Rica, Mexico, Spain and Türkiye, and above 60% in Czechia and the Slovak Republic (Table A1.1).

Among younger adults (25-34 year-olds) in OECD countries, the rates of upper secondary or post-secondary non-tertiary attainment range from 23% in Spain to 59% in Czechia. On average across the OECD, this share has slightly fallen, from 40% in 2019 to 39% in 2024, as younger adults are more likely to pursue tertiary education than they were a decade ago. However, upper secondary or post-secondary non-tertiary represents the most commonly attained level of education among 25-34 year-olds in about half of OECD countries (Table A1.2).

The gender difference is also widening at this level among 25-34 year-olds. Across OECD countries, on average, 44% of younger men had upper secondary or post-secondary non-tertiary attainment in 2024, 10 percentage points more than the rate for younger women (34%). In 2019, a similar gender gap was observed (45% for younger men and 36% for younger women). This is a reversal of the pattern for tertiary attainment, where the average difference between the share of 25-34 year-old women and men with tertiary attainment is 13 percentage points in favour of women. Notably, Norway is the only country where the gender gap at this level is more than twice as large, with 33% of younger men compared to just 16% of younger women attaining this level of education (Table A1.2).

Below upper secondary attainment

Attaining upper secondary education has become a minimum requirement for navigating the modern economy and society. Early school leavers are also more likely to experience lower levels of social cohesion and civic engagement compared to their more educated peers (OECD, 2023[3]). These disadvantages – both social and economic – are likely to deepen as societies become more reliant on digital technologies.

Despite the educational expansion experienced over the past decades, on average across OECD countries, 19% of adults (25-64 year-olds) still do not have an upper secondary qualification in 2024. In Brazil, China, Costa Rica, India, Indonesia, Mexico, Portugal, South Africa and Türkiye, the most commonly held attainment level of education for the adult population remains below upper secondary (Table A1.1). However, the share of adults with below upper secondary attainment is gradually declining, particularly among younger generations. The share among 25-34 year-olds has been steadily decreasing across OECD countries in recent years, from 15% in 2019 to 13% in 2024. Among OECD countries, the highest proportion is found in Mexico (41%), while the lowest is in Korea (1%) (Table A1.2). This trend highlights that those without upper secondary qualifications are predominantly older adults, with younger generations increasingly achieving this level of education.

In most OECD and partner countries, young men are more likely than young women to lack an upper secondary qualification, with an OECD average of 14% for young men and 11% for young women. The gender gap is 8 percentage points or higher in Costa Rica and Portugal. Bulgaria, Korea, and Mexico are the exceptions, where there is no gender gap in the share of individuals with below upper secondary attainment (Table A1.2).

To address evolving labour-market demands and the need for new skills, OECD countries have been actively implementing policies to encourage individuals to remain in the education system and achieve higher levels of educational attainment (OECD, 2018[1]). These efforts have become increasingly important in the context of digitalisation and the growing integration of artificial intelligence (AI) into the workplace. Recent OECD analysis underscores the importance of aligning education and training systems with emerging skill needs, particularly by strengthening access to high-quality learning opportunities throughout people's lives (OECD, 2023[4]). In this context, upper secondary and post-secondary education play a critical role in equipping learners with the competencies necessary to engage with AI-driven technologies and remain resilient in an increasingly dynamic labour market (OECD, 2023[5]).

Box A1.1. Languages used in labour force surveys: National approaches and implications

In many countries, the national labour force survey (LFS) is a key source of labour-market statistics, providing crucial information on educational attainment, employment, unemployment and workforce participation, among other measures. Typically gathered monthly or quarterly, LFS data are widely used for economic analysis, policy design and international comparisons. These surveys cover a significant proportion of the population, aiming to reflect labour-market trends and inform policy decisions.

In *Education at a Glance*, LFS data are used extensively in Chapter A1 (on educational attainment), Chapter A2 (on the transition from school to work), Chapter A3 (on labour-market outcomes) and occasionally in other chapters such as A5 (on adult education). The reliability, coverage and comparability of LFS data make them a fundamental input to understanding how education influences labour-market dynamics across countries.

However, like any survey, the LFS can be affected by methodological challenges. One critical issue is linguistic accessibility – if certain population groups are unable to participate due to language barriers, this could introduce biases in the data. Given the increasing linguistic diversity in many OECD countries due to migration and demographic shifts, ensuring that surveys are accessible to all residents, regardless of language proficiency, is an important challenge for national statistical offices.

To explore this issue, the INES Network on Labour Market, Economic and Social Outcomes (LSO Network) conducted an ad-hoc survey on how OECD countries address linguistic diversity in their national LFS. Table A1.1.a presents the results, based on the responses received. These suggest there are three main approaches:

Table A1.1.a. Language use in the Labour Force Surveys (LFS)

Survey type	Countries	Rationale
Surveys conducted only in the official language(s)	Brazil, Canada, Czechia, the Netherlands, New Zealand, Poland, Portugal and the Slovak Republic	Reflects linguistic norms; may face limitations in capturing data from non-native speakers
Surveys conducted in the official language(s) and English	Flemish Community of Belgium (Belgium), Bulgaria, Costa Rica, Denmark, Finland, Germany, Latvia, Luxembourg, Switzerland and Türkiye	English is included due to its role as a global lingua franca, aiding participation among international residents
Surveys conducted in the official language(s), English and/or other languages	Austria, Estonia, Israel, Italy, Korea, Lithuania, Spain, Sweden, United Kingdom, United States	Addresses significant minority languages to improve inclusivity and data accuracy

Note: The United States has no official language but conducts the survey in English and other prevalent languages.

Potential biases and country practices in addressing linguistic barriers

The choice of language in LFS administration can significantly impact data quality and representativeness. Some countries, particularly those with skilled migration programmes (e.g. Canada, New Zealand and Portugal), conduct their surveys only in their official languages, assuming that most foreign-born residents have sufficient proficiency. However, this approach may result in under-representation of certain groups, particularly recent migrants or lower-skilled workers.

Countries with multilingual survey options often tailor their approaches to local linguistic contexts. For instance, Estonia conduct LFS in both the national language and Russian, reflecting the presence of large Russian-speaking communities, while Latvia conducted it in both languages until the end of 2022. Similarly, in Canada, the LFS is available in English and French, and when respondents do not speak either language, a knowledgeable household member (often a child in immigrant families) may assist in translation, ensuring data collection is not compromised.

Some countries allow for technological solutions to facilitate multilingual participation. Germany, for example, officially administers the LFS in German and English but acknowledges that some respondents rely on translation software to complete the survey, even though no official recommendations exist for their use.

In certain cases, countries introduce supplementary measures to capture data on migrant populations more accurately. For instance, the Slovak Republic conducts an additional survey module on migrants, as its LFS only covers private households, thereby excluding many recent migrants who reside in collective housing. Similarly, in the United States, the Census Bureau's Current Population Survey (CPS) is conducted in English, but interviewers offer assistance in Spanish and other commonly spoken languages (such as French, Mandarin, Korean and Arabic) to enhance participation and reduce response bias. In Sweden the questionnaire is in Swedish with interpreter assistance available online.

Key considerations

Ensuring that Labour Force Surveys (LFS) effectively capture data from all segments of the population is crucial for accurate labour-market analysis. While multilingual survey options can enhance inclusivity, they also introduce methodological challenges. Policy makers must balance linguistic accessibility with data consistency, ensuring that LFS data accurately reflect workforce participation across diverse linguistic groups.

- Technical challenges:
    - Conducting the LFS in multiple languages requires additional resources, trained personnel and standardised methodologies to ensure data quality.
    - Developing the LFS questionnaire in another language must also meet the same strong legal requirements as a questionnaire in the national language. This often presents a legal challenge. It is therefore sometimes easier to use lists or explanations in the other languages.
- Data interpretation risks: Respondents answering in a non-native language may misinterpret survey questions, leading to inconsistencies in responses. This issue requires careful consideration in data validation and analysis.
- Policy context and relevance: Countries vary in their linguistic inclusion strategies depending on their migration patterns. While some countries adapt surveys to capture recent migration trends, others account for historically established linguistic minorities. Countries with skilled migration programmes may assume that migrants already possess sufficient language skills, but this assumption should be monitored and evaluated.
- Implications for labour-market and education policies: Understanding linguistic diversity in LFS is essential for designing inclusive policies that adequately support migrants and non-native speakers. When surveys are conducted in multiple languages, they are more likely to capture the experiences of a broader and more diverse population. In contrast, surveys administered in only one language risk excluding linguistic minorities, which may lead to their underrepresentation in the data and, consequently, in the policies informed by those data.

Subnational variation in educational attainment

Educational attainment can vary significantly within countries. Capital regions, which often encompass the country's largest city, tend to have a more highly skilled workforce attracted by the job opportunities in the public and private sector. In contrast, rural areas generally have a less-skilled workforce with lower levels of educational attainment (OECD, 2023[6]). Internal migration patterns contribute to this disparity, as individuals move from rural areas to urban centres in search of better educational opportunities and higher-skilled jobs. This movement concentrates skilled labour in capital regions, reinforcing regional inequalities in education and employment. Capital regions and large metropolitan regions also have more infrastructure (OECD, 2023[6]), and larger educational institutions are typically concentrated in major economic and capital regions (Hermannsson, Scandurra and Graziano, 2019[7]). These areas also have the services needed to support their populations effectively and attract more individuals. The following analysis is of regions at the TL2 level, which are large subnational regions as defined by the OECD's official regional classification (OECD, 2023[8]).

In most OECD countries, overall tertiary attainment rates for 25-64 year-olds vary widely across subnational regions. The most significant regional disparities are found in Canada and Hungary, where the difference between the highest and lowest performing regions reaches 38 percentage points. In Canada, Ontario boasts a tertiary attainment rate of 71%, while Nunavut lags at just 33%. Similarly, in Hungary, tertiary attainment ranges from 59% in the capital, Budapest, to only 21% in Northern Hungary. These disparities reflect deep-rooted urban-rural divides and suggest the continuing need for region-specific educational policies and enhanced social support systems, particularly in remote communities (Table A1.5, available on line).

Conversely, Ireland and Slovenia exhibit limited regional variation, with a gap of just 6 percentage points between the highest and lowest performing regions in Ireland and of 8 percentage points in Slovenia. Ireland's tertiary attainment rates range from 53% (Southern) to 60% percent (Eastern and Midland), suggesting broadly uniform educational outcomes. In Slovenia, the difference between Eastern Slovenia (31%) and Western Slovenia (39%) also indicates modest disparities (Table A1.5, available on line).

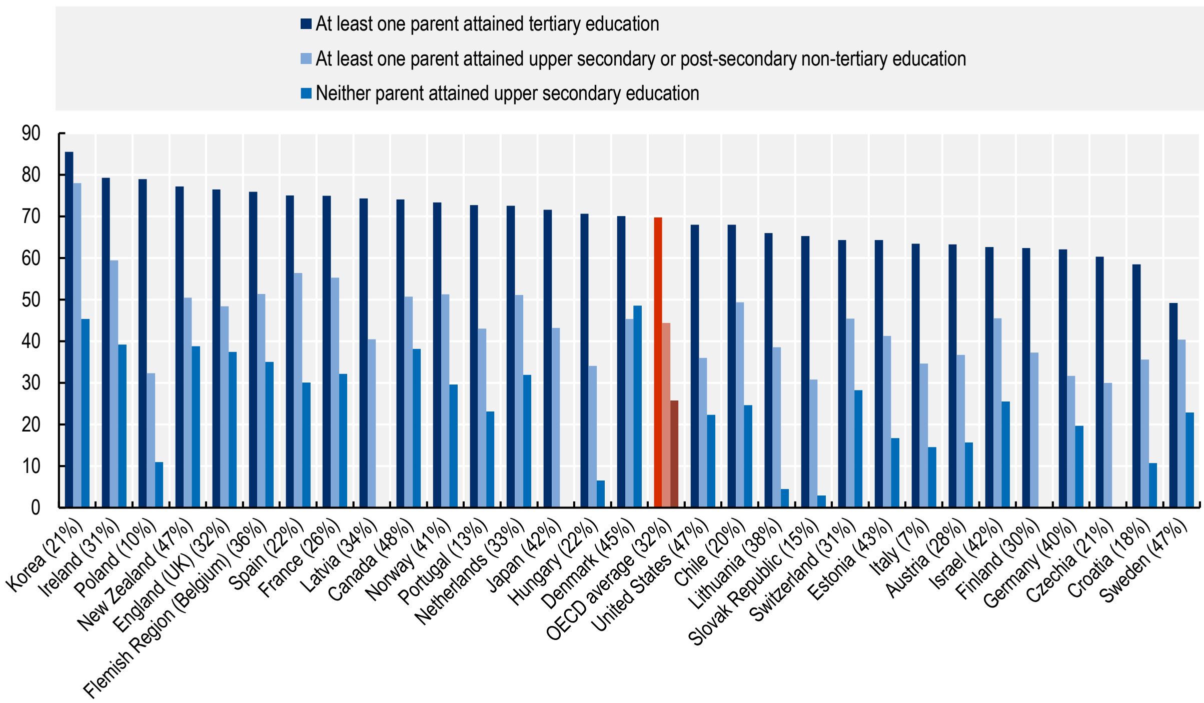
Intergenerational mobility

Individuals' educational attainment remains closely tied to that of their parents across OECD countries. Data from the Survey of Adult Skills (PIAAC) (2024[9]) show that the likelihood of completing tertiary education is around 70% for young adults with at least one tertiary-educated parent, while the likelihood of having the same level of education as their parents corresponds to 48% and 27% for those with upper secondary or post-secondary non-tertiary and below upper secondary, respectively (Table A1.4, available on line).

Figure A1.4 further illustrates the role of intergenerational transmission in shaping tertiary educational attainment. As noted, young adults with at least one tertiary-educated parent are significantly more likely to also attain tertiary education, while the probability drops considerably for those whose parents have lower levels of education (44% for those whose parents have attained at most upper secondary or post-secondary non-tertiary education, and 26% for those whose neither parent completed upper secondary. In Hungary, Lithuania, Poland and the Slovak Republic, young adults with tertiary-educated parents are over 60 percentage points more likely to attain tertiary education than those whose parents lack upper secondary education (Figure A1.4).

Figure A1.4. Share of 25-34 year-old adults with tertiary education, by parental educational attainment (2023)

Survey of Adult Skills (PIAAC); in per cent



Note: The percentage in parentheses represents the share of tertiary-educated parents.
For data, see Table A1.4 (available on line). For a link to download the data, see Tables and Notes section.

The persistence of educational advantage is mirrored by "sticky floors" at the lower end (OECD, 2018[10]). In the Slovak Republic, 55% of young adults whose parents lacked upper secondary education also remain below that threshold, while this share is 48% in both Hungary and Spain (Table A1.4, available on line). These patterns highlight how family background continues to shape educational trajectories across generations (OECD, 2024[11]). However, given the relatively small sample sizes for some countries, the associated estimates carry a high degree of uncertainty, and differences between countries may not be statistically significant. Results should therefore be interpreted as indicative of broad patterns rather than precise rankings.

Despite this, intergenerational mobility remains evident in many countries. In all countries, upward mobility (i.e. adults whose educational attainment is higher than that of their parents) is considerably more common than downward mobility. Among young adults whose parents attained upper secondary education, 44% exceed this by completing tertiary education on average, while just 8% fail to reach upper secondary. In Denmark, the share of young adults whose parents did not complete upper secondary education but who themselves attained tertiary education has risen by 20 percentage points since 2012, reaching 49%, which is above the OECD average for young adults of all backgrounds. Similar progress has been observed in England and the Flemish Community of Belgium, where tertiary attainment among this group has increased by 12 percentage points.

The contrast between strong upward mobility and limited downward mobility among young adults whose parents attained upper secondary education is particularly pronounced in countries such as France, Ireland and Korea. In these countries, both high levels of tertiary attainment among this group (upward mobility) and a low share of below upper secondary attainment (downward mobility) combine to produce large differences. In Korea, for example, 78% of young adults whose parents attained upper secondary education attain tertiary education, while just 1% attained below upper secondary – a 77 percentage-point difference. Similarly, the difference reaches 56 points in Ireland and 50 points in France (Table A1.4, available on line).

At the same time, downward mobility is not uncommon. Despite the general expansion of tertiary attainment across OECD countries, nearly 30% of young adults with tertiary-educated parents do not reach tertiary attainment themselves, most often completing only upper secondary or post-secondary non-tertiary education. While this may indicate constrained opportunities in some countries, it can also reflect high social mobility in others. In Sweden, for example, over half (51%) of young adults with tertiary-educated parents do not attain tertiary education themselves; combined with high levels of tertiary attainment among those with less educated parents, this suggests that tertiary educational attainment is influenced by parents' education to a smaller extent (Figure A1.4). Similarly, in Germany, the strong VET system offers alternative pathways that may reduce the relevance of parental education to educational outcomes.

Definitions

Age groups: Adults refer to 25-64 year-olds; younger adults refer to 25-34 year-olds.

Educational attainment refers to the highest level of education successfully completed by an individual.

Levels of education: See the *Reader's Guide* at the beginning of this publication for a presentation of all ISCED 2011 levels.

Methodology

Educational attainment profiles are based on annual data on the percentage of the adult population (25-64 year-olds) in specific age groups who have successfully completed a specified level of education.

In OECD statistics, recognised qualifications from ISCED 2011 level 3 programmes that are not of sufficient duration for ISCED 2011 level 3 completion are classified at ISCED 2011 level 2 (see the Reader's Guide). Where countries have been able to demonstrate equivalencies in the labour-market value of attainment formally classified as the "completion of intermediate upper secondary programmes" – such as achieving five good General Certificates of Secondary Education (GCSEs) or equivalent in the United Kingdom (note that each GCSE is offered in a specific school subject) – and "full upper secondary attainment", attainment of these programmes is reported as ISCED 2011 level 3 completion in the tables that show three aggregate levels of educational attainment (UNESCO-UIS, 2012[12]).

Most OECD countries include people without formal education under the international classification ISCED 2011 level 0. Averages for the category "less than primary educational attainment" are therefore likely to be influenced by this inclusion.

See the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018[13]) and *Education at a Glance 2025 Sources Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en) for more information.

Source

Data on educational attainment for most countries are taken from OECD databases, which are compiled from National Labour Force Surveys by the OECD Labour Market, Economic and Social Outcomes of Learning (LSO) Network. Data on educational attainment for Argentina, the People's Republic of China, India, Indonesia and South Africa are taken from the International Labour Organization (ILO) database.

Data on subnational regions for selected indicators are available in the OECD *Regional Statistics Database* (OECD, 2023[14]).

Data on intergenerational mobility are based on the Survey of Adult Skills (PIAAC) (2012-15 and 2023). PIAAC is the OECD Programme for the International Assessment of Adult Competencies.

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Tables and Notes

Chapter A1 Tables

Table A1.1	Educational attainment of adults (2024)
Table A1.2	Trends in the educational attainment of 25-34 year-olds, by gender (2019 and 2024)
Table A1.3	Field of study among tertiary-educated adults (2024)
WEB Table A1.4	*Intergenerational mobility in educational attainment (2012 and 2023)*
WEB Table A1.5	*Educational attainment of adults, by subnational region (2024)*

StatLink https://stat.link/vur4y1

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table A1.1. Educational attainment of adults (2024)

Note: In most countries data refer to ISCED 2011. For Argentina and India data refer to ISCED-97. Total might not add up to 100% for the averages because of missing data for some levels for some countries. Data for Argentina, China, India, and Indonesia are based on ILO (2025).

1. Year of reference differs from 2024: 2023 for Argentina, Brazil, Iceland, India and the United States; 2022 for Chile and Indonesia; and 2020 for China.

Table A1.2. Trends in the educational attainment of 25-34 year-olds, by gender (2019 and 2024)

Note: In most countries data refer to ISCED 2011. For Argentina and India data refer to ISCED-97. Columns showing data for men and women, and for short-cycle tertiary and doctoral or equivalent attainment are available for consultation on line. Data for Argentina, China, India, and Indonesia are based on ILO (2025).

1. Year of reference differs from 2024: 2023 for Argentina, Brazil, Iceland, India and the United States; 2022 for Chile and Indonesia.
2. Year of reference differs from 2019: 2020 for Chile; 2021 for Finland; and 2022 for Peru.

Table A1.3. Field of study among tertiary-educated adults (2024)

Note: Category totals may not be equivalent to the sum of the subcategories because some programmes cannot be classified into a specific subcategory but are included in the total. In addition, data on humanities (except languages), social sciences, journalism and information might refer to the broad field social sciences, journalism and information only. Columns showing data for the categories Total are available for consultation on line.

1. Year of reference differs from 2024: 2022 for Chile; 2021 for Canada, Denmark, Ireland and the United Kingdom; 2017 for the United States.

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table A1.1. Educational attainment of adults (2024)

Percentage of 25-64 year-olds with a given level of education as the highest level attained

	Below upper secondary						Upper secondary or post-secondary non-tertiary			Tertiary					
	Less than primary	Primary	Completion of intermediate lower secondary programmes	Lower secondary	Completion of intermediate upper secondary programmes	Total	Upper secondary	Post-secondary non-tertiary	Total	Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	Total	All levels of education
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Australia	0	3	a	10	a	13	28	5	34	11	30	10	2	53	100
Austria	x(2)	1[d]	a	12	a	13	46	3	49	15	6	15	1	38	100
Belgium	3	3	a	11	a	17	36	2	38	1	25	18	1	45	100
Canada	x(2)	2[d]	a	5	a	6	19	9	29	26	26	13[d]	x(12)	65	100
Chile[1]	5	4	a	17	a	25	42	a	42	10	20	2	0	33	100
Colombia	x(6)	x(6)	a	m	4	33	m	x(9)	37	x(14)	m	x(14)	x(14)	31	100
Costa Rica	10	24	7	8	2	52	20	0	21	8	17	3	0	28	100
Czechia	0	0	a	6	a	6	67[d]	x(7)	67	0	7	19	1	27	100
Denmark	x(2)	1[d]	a	15	a	16	39	0	39	5	22	16	2	45	100
Estonia	0	1	a	9	a	10	38	10	48	5	15	22	1	43	100
Finland	x(2)	1[d]	a	10	a	11	45	2	46	7	18	17	1	43	100
France	1	3	a	12	a	16	40	0	41	15	12	16	1	43	100
Germany	x(2)	6[d]	a	10	a	16	36	13	50	1	19	12	2	34	100
Greece	1	9	a	8	0	18	37	10	47	0	24	10	1	35	100
Hungary	0	0	a	11	a	12	50	7	57	2	13	15	1	31	100
Iceland[1]	x(2)	0[d]	a	20	a	20	29	6	35	6	20	17	1	44	100
Ireland	0	3	a	8	a	11	18	14	32	2	37	17	2	58	100
Israel	3	3	a	6	a	12	37	a	37	10	25	14	1	51	100
Italy	1	3	a	29	a	33	43	1	44	0	6	15	1	22	100
Japan	x(7)	x(7)	a	x(7)	a	m	43[d]	x(10)	x(10)	21[d]	36	x(14)	x(14)	57[d]	100
Korea	x(2)	2[d]	a	5	a	7	37	a	37	15	36	5[d]	x(12)	56	100
Latvia	0	0	a	7	2	11	37	12	49	5	18	18	0	40	100
Lithuania	0	0	0	4	2	7	27	18	45	a	31	16	1	48	100
Luxembourg	1	7	a	10	a	18	26	2	28	4	17	30	3	54	100
Mexico	9	14	2	27	3	54	24	a	24	1	19	2	0	22	100
Netherlands	2	4	a	12	a	18	36	0	37	2	24	18	1	45	100
New Zealand	x(4)	x(4)	a	17[d]	a	17	25	14	39	4	32	7	1	44	100
Norway	m	m	a	17	a	17	32	0	32	11	22	17	0	50	100
Poland	0	1	a	4	a	5	53	3	55	0	9	30	1	39	100
Portugal	1	19	a	18	a	38	29	1	30	0	10	20	1	31	100
Slovak Republic	0	0	0	5	0	6	63	2	65	0	4	24	1	29	100
Slovenia	x(6)	x(6)	x(6)	x(6)	a	11	54	a	54	m	m	m	m	35	100
Spain	2	5	a	28	a	35	23	0	23	13	12	17	1	42	100
Sweden	x(2)	2[d]	a	6	3	12	28	8	36	10	21	18	2	52	100
Switzerland	0	1	a	12	a	14	40[d]	x(7)	40	m	25	18	3	46	100
Türkiye	4	30	a	15	a	50	23	a	23	7	17	2	1	27	100
United Kingdom	c	0	c	17	11	17	18	a	29	9	28	15	2	54	100
United States[1]	1	2	a	5	a	8	41[d]	x(7)	41	10	25	13	2	51	100
OECD average	2	5	2	12	3	19	36	6	40	7	20	15	1	42	100
Partner and/or accession countries															
Argentina[1]	3	14	m	16	m	32	44	a	44	x(11)	24[d]	x(11)	m	24	100
Brazil[1]	11	15	a	13	a	40	m	m	39	x(11)	20[d]	1	0	22	100
Bulgaria	1	2	a	10	a	13	53	0	53	a	10	23	0	34	100
China[1]	2	17	a	44	a	63	18	0	18	10	8	1[d]	x(12)	19	100
Croatia	0	0	a	9	a	10	60	a	60	3	7	20	1	30	100
India[1]	30	14	a	31	a	75	9	1	11	x(11)	14[d]	x	m	14	100
Indonesia[1]	13	26	a	18	a	57	30	a	30	3	10	1	0	13	100
Peru	2	17	a	m	41	61	m	a	m	m	37	3[d]	x(12)	39	100
Romania	1	3	a	16	5	25	53	3	56	m	19	m	m	19	100
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	8	4	4	6	27	49	34	8	42	1	7	1[d]	x(12)	9	100
EU25 average	1	3	0	11	2	15	41	5	46	4	16	19	1	39	100
G20 average	7	10	m	16	m	34	31	5	33	9	20	8	m	34	100

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A1.2. Trends in the educational attainment of 25-34 year-olds, by gender (2019 and 2024)

Percentage of 25-34 year-olds with a given level of education as the highest level attained

	Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary					
					Bachelor's or equivalent		Master's or equivalent		Total	
	2019	2024	2019	2024	2019	2024	2019	2024	2019	2024
OECD countries	(3)	(6)	(9)	(12)	(21)	(24)	(27)	(30)	(39)	(42)
Australia	9	8	38	35	32	36	10	11	52	57
Austria	11	10	48	46	11	14	14	15	42	44
Belgium	15	13	38	36	24	28	22	22	47	51
Canada	6	5	31	27	28	31	11[d]	14[d]	63	69
Chile[1, 2]	12	11	47	48	28	28	2[d]	2	41	41
Colombia	27	17	42	47	31[d]	m	x (39)	x(42)	31	37
Costa Rica	46	34	22	31	21	21	1	1	31	35
Czechia	7	8	60	59	12	13	20	20	33	33
Denmark	18	15	35	33	23	25	19	20	47	51
Estonia	11	12	46	44	26	23	17	20	43	43
Finland[2]	9	10	51	51	26	24	14	15	40	39
France	13	11	39	36	13	15	20	26	48	53
Germany	13	15	54	45	18	23	14	15	33	40
Greece	13	7	45	48	32	31	9	13	42	45
Hungary	13	12	57	55	12	9	15	21	31	32
Iceland[1]	22	19	36	38	25	22	15	17	42	44
Ireland	7	4	37	30	35	42	14	21	55	66
Israel	9	9	44	44	28	29	8	8	47	47
Italy	24	19	48	49	12	13	16	17	28	32
Japan	m	m	m	m	42[d]	48[d]	x(21)	x(24)	62	66
Korea	2	1	28	28	46	48	3[d]	3[d]	70	71
Latvia	11	10	45	44	24	25	12	12	44	45
Lithuania	7	6	38	36	39	41	16	16	55	58
Luxembourg	13	9	32	26	20	20	30	39	55	65
Mexico	49	41	28	30	22	27	1	2	24	29
Netherlands	12	10	38	35	29	31	19	22	50	56
New Zealand	13	11	43	41	35	36	5	6	44	48
Norway	17	16	34	25	22	27	15	19	49	59
Poland	6	5	51	49	13	14	30	31	43	46
Portugal	24	16	38	41	21	25	16	17	38	43
Slovak Republic	9	7	51	56	7	7	31	29	39	37
Slovenia	5	7	51	49	11	m	19	m	44	43
Spain	30	24	23	23	15	19	17	18	47	53
Sweden	16	12	35	32	23	26	13	18	48	56
Switzerland	6[b]	9	41[b]	40	29[b, d]	29	22[b, d]	19	53[b]	51
Türkiye	41	28	24	28	22	28	3	3	35	44
United Kingdom	14	12	34	28	30	35	14	17	52	60
United States[1]	7	6	42	42	28	29	10	11	50	52
OECD average	15	13	40	39	24	26	14	16	45	48
OECD average for countries with available and comparable data for both years	16	13	40	39	24	26	15	17	45	49
Partner and/or accession countries										
Argentina[1]	27	26	53	55	19[d]	19[d]	x(21)	x(24)	19	19
Brazil[1]	32	27	47	50	20[d]	23[d]	1	1	21	24
Bulgaria	18	12	50	48	14	18	19	22	33	40
China	m	m	m	m	m	m	m	m	m	m
Croatia	4	4	60	57	10	11	23	27	35	39
India[1]	66	61	13	16	20[d]	23[d]	x(21)	x(24)	20	23
Indonesia[1]	46	42	36	40	13	14	1	1	17	18
Peru[2]	52	49	m	m	47	50	1	2[d]	48	51
Romania	26	24	49	53	26	23	m	x	26	23
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
South Africa	50	43	36	49	6	7	1	1	14	9
EU25 average	13	11	45	43	20	22	18	21	42	45
G20 average	27	23	37	37	23	26	m	m	38	42

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A1.3. Field of study among tertiary-educated adults (2024)

Percentage of 25-64 year-olds with tertiary attainment

		Arts and humanities, social sciences, journalism and information		Business, administration and law		Science, technology, engineering and mathematics (STEM)			Health and welfare		
	Education	Arts	Humanities (except languages), social sciences, journalism and information	Business and administration	Law	Natural sciences, mathematics and statistics	Information and communication technologies (ICT)	Engineering, manufacturing and construction	Health (medical and dental)	Health (nursing and associate health fields)	Other fields
OECD countries	(1)	(2)	(3)	(5)	(6)	(8)	(9)	(10)	(12)	(13)	(15)
Australia	10	m	m	m	m	4	7	12	m	m	5
Austria	10	4	8	9	4	4	3	25	3	4	10
Belgium	10	m	12	m	m	6	4	12	m	m	5
Canada[1]	7	4	11	22	2	6	5	14	3	9	9
Chile[1]	16	4	14	22	3	25	4	1	m	m	7
Colombia	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	18	4	8	47	8	1	7	11	m	m	4
Czechia	16	4	25	m	5	7	7	19	4	3	10
Denmark[1]	9	3	12	12	3	5	5	13	m	m	5
Estonia	11	5	8	21	4	5	5	18	3	5	11
Finland	6	4	8	18	2	4	8	19	2	10	7
France	5	m	7	m	m	6	5	14	m	m	7
Germany	13	3	7	10	3	5	5	25	4	2	6
Greece	9	m	15	m	m	5	6	13	m	m	11
Hungary	10	4	20	18	5	6	7	10	3	5	7
Iceland	m	m	m	m	m	m	m	m	m	m	m
Ireland[1]	9	m	4	m	m	7	8	10	m	m	18
Israel	m	m	m	m	m	m	m	m	m	m	m
Italy	5	5	16	12	9	8	2	15	m	m	5
Japan	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m
Latvia	12	3	17	20	6	3	4	13	7	1	8
Lithuania	7	4	14	22	6	4	5	19	4	4	8
Luxembourg	8	m	6	m	m	6	8	9	m	m	5
Mexico	13	3	9	24	9	3	7	15	4	6	5
Netherlands	9	4	12	24	5	5	5	11	4	7	7
New Zealand	m	m	m	m	m	m	m	m	m	m	m
Norway	15	3	14	13	3	6	4	12	m	m	7
Poland	13	1	19	18	3	6	5	14	m	m	8
Portugal	12	m	10	m	m	4	3	18	m	m	7
Slovak Republic	16	m	18	m	m	5	5	16	m	m	8
Slovenia	18	3	17	12	6	5	4	23	m	m	13
Spain	11	m	6	m	m	5	7	15	m	m	7
Sweden	14	3	11	13	3	4	4	21	4	9	5
Switzerland	7	3	7	24	4	6	4	20	3	9	7
Türkiye	m	m	m	m	m	m	m	m	m	m	m
United Kingdom[1]	5	m	3	m	m	2	4	19	m	m	13
United States[1]	10	6	20	m	m	10	4	10	m	m	6
OECD average	11	m	12	m	m	6	5	15	m	m	8
Partner and/or accession countries											
Argentina	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m
EU25 average	11	m	13	m	m	5	5	16	m	m	8
G20 average	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Chapter A2. Transition from education to work: Where are today’s youth?

Highlights

- Across OECD countries, 54% of 18–24 year-olds are in education, and 19% combine work and study. This is nearly twice the share observed among 25–29 year-olds (10%), highlighting that younger adults are more likely to combine education with employment. The Netherlands stands out, with 51% of 18–24 year-olds enrolled in education and employed.
- The shares of young people who are neither employed nor in education or training (NEET) are now below pre-pandemic levels in about half of OECD and partner countries with available trend data. In 8 of these 16 countries, the decline exceeds 1 percentage point. Meanwhile NEET rates have risen in almost the same number of OECD countries. Among the 17 countries where rates now exceed their pre-pandemic benchmarks, 6 have seen increases of more than 2 percentage points.
- For most youth, unemployment tends to last only a short spell of time. Across the OECD, less than 2% of 18-24 and 25-29 year-olds are unemployed and have been out of work for 12 months or more, while around 4% have been looking for work for under a year.

Context

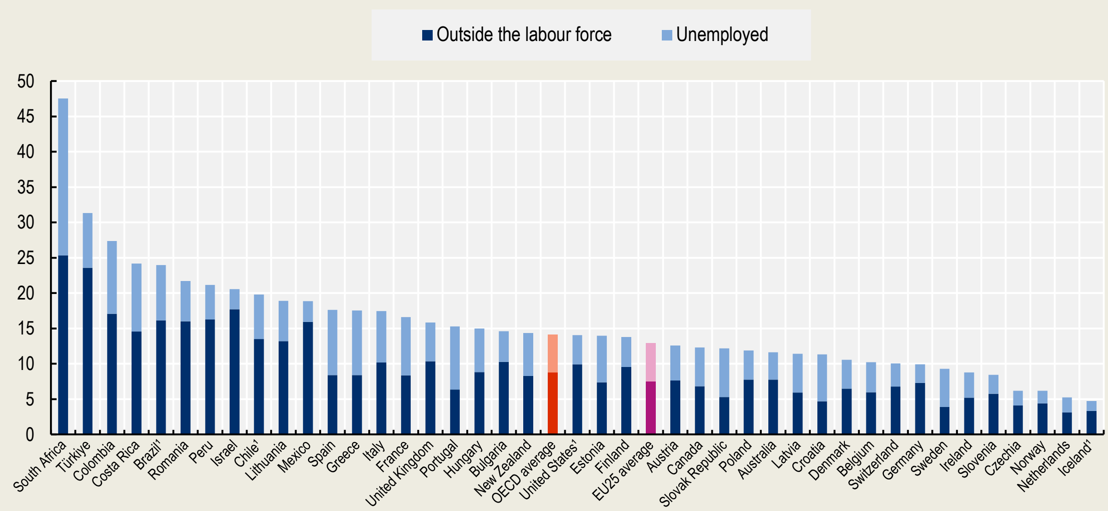
The transition from education to employment is a complex process influenced by factors such as educational attainment, economic conditions and labour-market demand. Although education plays a fundamental role in improving young people’s employment prospects, it is crucial that the skills they acquire through education are aligned with those needed in the labour market. Many young people stay in education to enhance their employability but if their skills are not in demand, they may continue to face difficulties finding employment. Economic downturns and weak labour markets can further limit opportunities, leaving even highly qualified individuals struggling to find work and increasing the risk of prolonged unemployment.

Extended periods of unemployment can have serious consequences, particularly for young people whose working lives may later be impacted by the consequences of such early joblessness. Being out of the labour market for an extended period reduces their opportunities to gain work experience and develop essential soft skills, making it increasingly difficult to secure employment. Employers may also perceive employment gaps negatively, further compounding the challenge. This cycle of limited experience and prolonged unemployment can lead to persistent labour-market and social exclusion, especially for those with lower levels of educational attainment or work qualifications (Pohlan, 2024[1]).

In addition to the economic implications, long-term unemployment can have significant psychological effects, including increased discouragement and mental health challenges such as anxiety and depression, which may further reduce motivation to seek employment (see Chapter A6). Better co-ordination between education systems and labour markets is needed to address these challenges and ensure that young people develop skills aligned with workforce needs. Policy measures should also improve employment opportunities, providing career guidance and offering mental health support. Strengthening the link between education and employment can help mitigate the risks of long-term unemployment and social disengagement of young people.

Figure A2.1. Share of 18-24 year-old NEETs, by labour-force status (2024)

In per cent



1. Year of reference differs from 2024.
For data, see Table A2.1. For a link to download the data, see Tables and Notes section.

Other findings

- Despite NEET rates largely returning to pre-pandemic levels, they remain high in several countries. On average, 14 % of 18-24 year-olds are NEET across OECD countries, but the share exceeds 25% in Colombia, the Republic of Türkiye and OECD partner country South Africa.
- Although average employment and NEET rates among 18-24 year-olds have remained virtually unchanged between 2019 and 2024, several countries have seen large differences within the overall figures. In Estonia, employment ratios fell by nearly 12 percentage points for men while increasing nearly 11 percentage points for women over the period. Meanwhile, Norway saw a 13 percentage-point decrease in employment rates coupled with a 16 percentage-point increase in those in education.
- Across OECD countries, the gender gap in education among 18-24 year-olds continues to favour women by more than 6 percentage points, with about 55% of women and 49% of men in education in both 2019 and 2024. In contrast, men were about 8 percentage points ahead of women in employment, with about 36% of men and 28% of women employed in both years.

Note

This chapter analyses the situation of young people in transition from education to work: those in education, those who are employed and those who are NEET. The NEET group includes not only those who have not managed to find a job (unemployed NEETs), but also those who are not actively seeking employment (NEETs outside the labour force, or inactive). The analysis distinguishes between 18-24 year-olds and 25-29 year-olds, as a significant proportion of those in the younger age group will be continuing their studies despite having completed compulsory, or in some countries even beyond compulsory, education.

Analysis

Transition from education to work for 18-24 year-olds

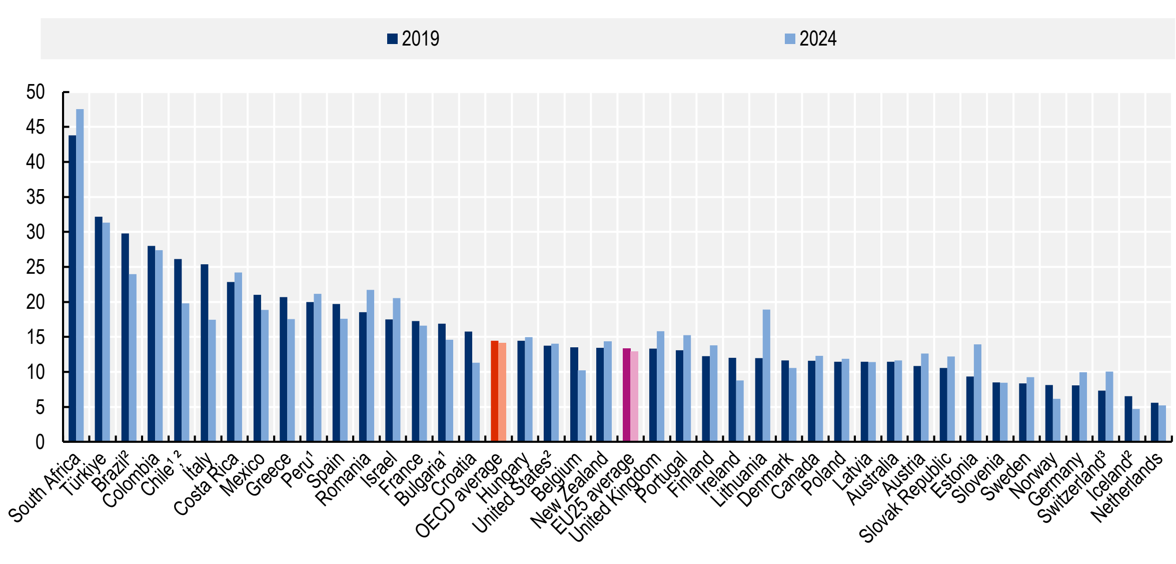
Individuals aged 18-24 are generally engaged in either education or employment, as this age range often coincides with participation in upper secondary or tertiary education, as well as initial entry into the labour market. This stage is critical in shaping future career trajectories and developing key skills for workforce participation. Despite this, a share of young people in this age group are neither in education nor employment and are classified as NEETs, suggesting that they may face underlying barriers to labour-market entry or continued education (Table A2.1.).

NEET rates can result from limited job opportunities in difficult economic conditions or a mismatch between young people's skills and labour-market demands. For example, dual labour markets – offering stable, well-paid- positions to some and precarious, low wage- jobs to others – exacerbate the risk of young people falling out of both work and study (Marques and Salavisa, 2017[2]). The status of being NEET also often stems not only from these structural labour market challenges or skills mismatches, but also from personal and social factors such as long term physical or mental health issues, addiction, exposure to violence and weak support networks (Rahmani and Groot, 2023[3]).

NEET rates vary considerably across OECD and partner countries, ranging from 48% of 18-24 year-olds in South Africa (about 22% unemployed and 25% outside the labour force) to as low as less than 5% in Iceland (about 1% unemployed and 3% outside the labour force). Countries vary in the proportions of those who are actively looking for employment and those who are outside the labour force. For example, in Türkiye (where 8% of 18-24 year-olds are unemployed and 24% are outside the labour force) and Mexico (3% unemployed and 16% outside the labour force, relatively large shares of youth not participating in the labour market may reflect country differences in education enrolment, family responsibilities, or cultural factors that may affect youth engagement. In contrast, there are many countries where the split is more balanced – for instance Greece and Spain, where in both cases around 9% are unemployed and 8% are outside the labour force – indicating that the youths not in education or training are more likely to be looking for jobs, even if they have not yet succeeded (Figure A2.1).

Figure A2.2. Trends in the share of 18-24 year-old NEETs (2019 and 2024)

In per cent



1. Year of reference differs from 2019.
2. Year of reference differs from 2024.
3. Break in series.
For data, see Table A2.2. For a link to download the data, see Tables and Notes section.

In 2024, after several years of recovery after the COVID-19 pandemic, the average NEET rate across OECD countries was 14%, similar to the value recorded in 2019. Italy saw the most significant drop, with an 8 percentage-point decrease, followed closely by Brazil and Chile. These decreases in NEET rates might indicate that mechanisms to support youth transitions into work, education or training, such as Italy's NEET Working Plan which was adopted in 2022, have been effective in improving individual pathways into employment or education for youth (Gaspani, Recchi and Rio, 2025[4]). Meanwhile, Lithuania experienced the largest increase (7 percentage points), followed by Estonia, Israel and Romania. These increases may point to emerging challenges such as structural shifts in the labour market, economic transitions, or areas where education and training systems are lagging behind new job market demands. Youth who become NEET repeatedly or for sustained periods face significantly greater long-term consequences than those whose NEET episodes are brief (Kleif, 2020[5]). About one-third of OECD countries saw practically no change, reflecting a return to similar levels of disengagement to those seen in 2019 (Figure A2.2).

However, stable averages at the OECD level can mask significant national shifts. For example, in Estonia, employment ratios fell by about 10 percentage points for men (from 41% in 2019 to 29% in 2024) while increasing by about 10 percentage points for women over the same period (from 28% to 38%). In Norway, the share of 18–24 year-olds in employment declined by about 13 percentage points (from 40% in 2019 to 27% in 2024), while the share in education rose by about 15 percentage points (from 51% to 67%). These examples reflect how underlying gender and country-specific trends can diverge substantially from aggregate figures (Table A2.2).

Youth and duration of unemployment

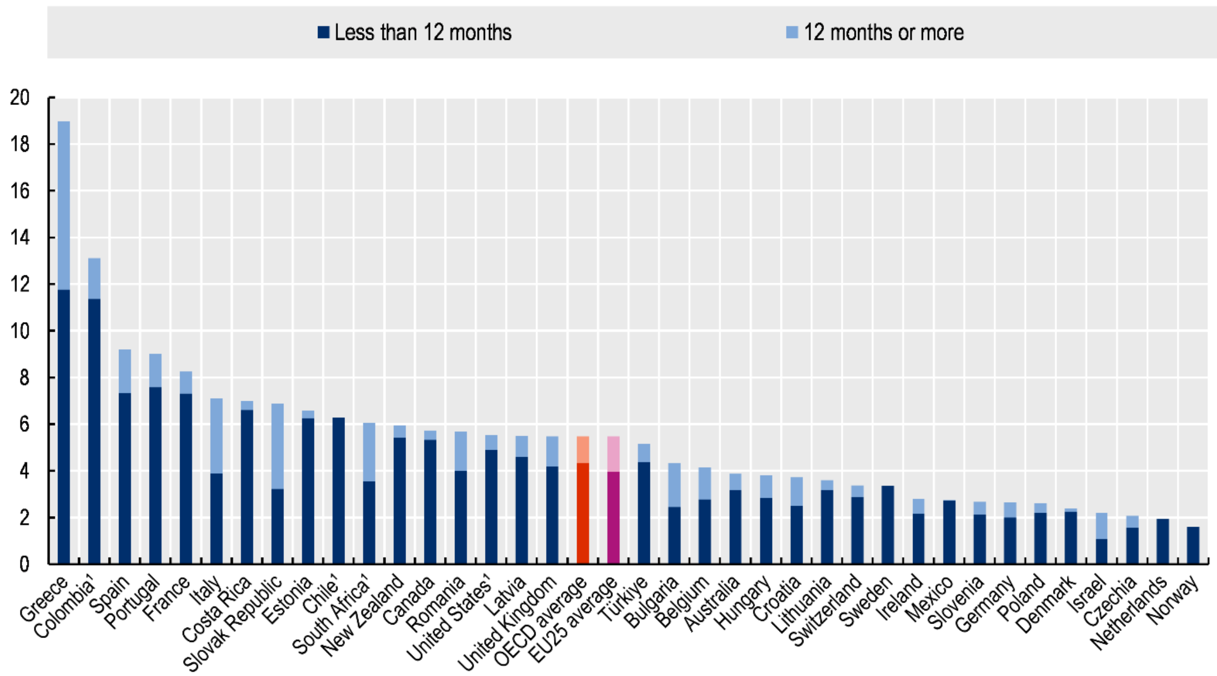
Youth unemployment, particularly among those aged 18 to 24, remains a significant concern as this age group is in a critical transition phase. Schmillen and Umkehrer (2017[6]) find that each additional day unemployed in the first 8 years on the job market leads to an extra half-day of unemployment over the next 16 years – clear evidence of persistent scarring, especially for those with repeated or lengthy spells. Prolonged unemployment, particularly in the absence of continued education or training, can limit young people's prospects for securing employment aligned with their skills and qualifications, while also undermining their long-term earning potential, well-being and motivation (Rahmani and Groot, 2023[3]).

In response to employment challenges, some young people opt to continue their education, specialising or developing skills that are in greater demand. Career guidance can be an effective intervention to support these decisions yet those groups that are already excluded from the labour market are less likely to seek or use these services, highlighting the need for more targeted outreach and support (OECD, 2021[7]).

Across OECD countries with available data, 1% of 18-24 year-olds are long-term unemployed (for 12 months or more) and 4% are in short-term unemployment (less than 12 months). The majority of young people who are unemployed across OECD countries have been so for the short term, ranging from 12% of 18-24 year-olds in Greece and 11% in Colombia to under 2% in Czechia, Israel, the Netherlands and Norway. Prolonged spells are most prevalent in Greece, Italy and the Slovak Republic, where rates exceed 3%. In contrast, less than 0.5% of youth in Canada, Costa Rica, Denmark, Estonia, Lithuania, Mexico, Norway and Poland are experiencing long-term unemployment (Figure A2.3).

Figure A2.3. Share of 18-24 year-olds who are unemployed and not in education, by duration of unemployment (2024)

In per cent



1. Year of reference differs from 2024.
For data, see Table A2.3.. For a link to download the data, see Tables and Notes section.

Individuals who experience long-term unemployment are more likely to be perceived as less skilled, or productive than their counterparts experiencing short-term spells of unemployment, making the duration of unemployment a crucial indicator of young people's labour market- engagement. Moreover, prolonged joblessness takes a serious psychological toll, raising the risk of inpatient mental health treatment, so that long-term youth unemployment becomes an indicator of distress both in economic and in health terms (Thern et al., 2017[8]). Employers may view youth who have been briefly unemployed more favourably – valuing their immediate availability – an advantage which vanishes for those experiencing extended joblessness, once again underscoring the powerful effect of longer spells of unemployment (Wachter, 2020[9]).

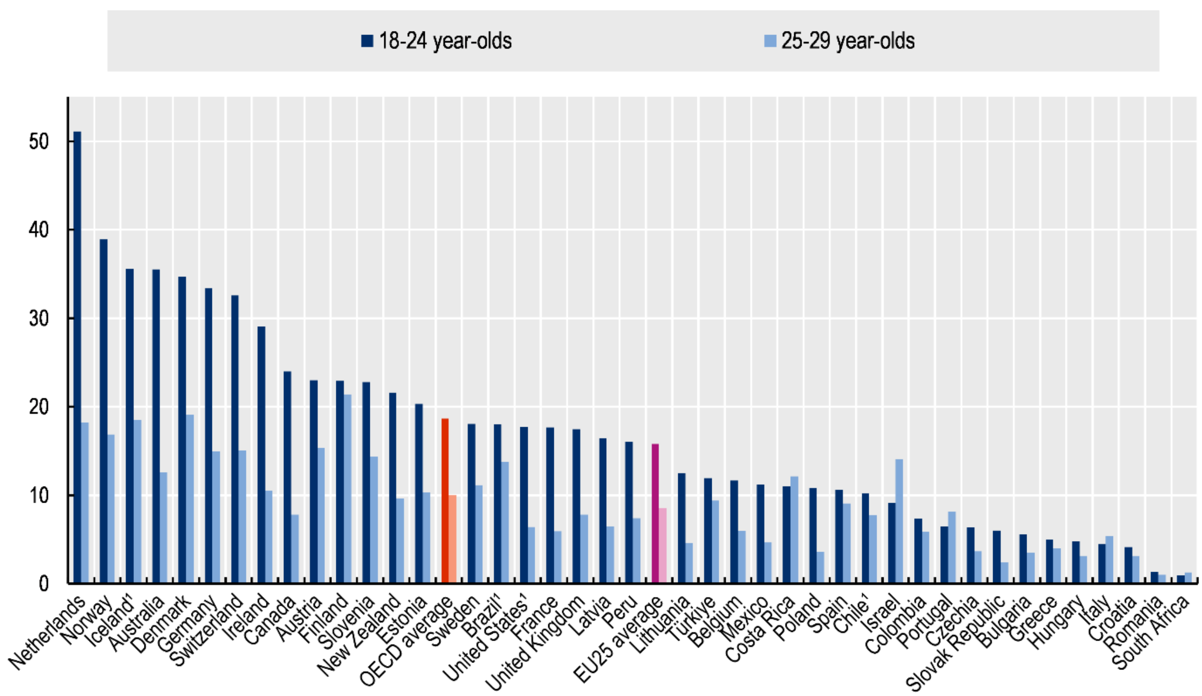
Gender differences are also pronounced in education and employment patterns. Across OECD countries, women aged 18–24 are over 6 percentage points more likely than men to be enrolled in education (56% versus 49%), while men are about 8 percentage points more likely to be employed (35% versus 28%). These persistent gender gaps suggest different trajectories through education and into the labour market (Table A2.2.).

Educational and labour-market status of 18-29 year-olds

Comparing the enrolment and employment patterns of 25-29 year-olds alongside 18-24 year-olds yields further insights into labour-market transitions. Many of those in the younger age group will still be studying or just entering the labour market for the first time. Those pursuing tertiary education may still be completing a bachelor's or master's degree at the age of 24, while others are starting their professional careers. A smaller share may be engaged in doctoral studies or equivalent qualifications. In contrast, a large majority of 25-29 year-olds will have completed their initial education in most OECD countries and many will have acquired substantial labour-market experience. Among those who are in education, some might be finishing their tertiary studies, while others might have re-entered education to obtain further qualifications (see Chapter B4).

Figure A2.4. Share of 18-29 year-olds combining education with employment, by age group (2024)

In per cent



1. Year of reference differs from 2024.
For data, see Table A2.1. For a link to download the data, see Tables and Notes section.

Some young adults combine education with employment, particularly in tertiary education, where part-time work can help cover tuition fees, accommodation and living expenses, or contribute to career development. Across OECD countries, almost one-fifth of 18-24 year-olds (19%) are combining education and employment, compared with 10% of 25-29 year-olds. The gap is widest in the Netherlands, where the education system includes many apprenticeships and a large number of students take on small, non-study-related side jobs; here over half of 18-24 year-olds (51%) are both working and studying, compared to less than one-fifth- of their older peers (18%). Costa Rica, Israel, Italy and Portugal are exceptions to this pattern, where the older cohort are slightly more likely to be both working and learning, reflecting the spread of part-time master's and up-skilling programmes. Meanwhile, in Colombia, Czechia, Greece, Hungary, Italy, Portugal, Romania, the Slovak Republic and South Africa, less than 10% of either cohort combine education and employment (Figure A2.4). These differences underscore institutional and cultural contrasts in tuition regimes, labour regulations, campus job opportunities and even employers' perspectives on hiring students. Differences between younger and older cohorts can also reflect financial necessity or even the structure of higher education programmes. For instance, high rates of study and work among 25-29 year-olds in Finland may be driven by the expansion of apprenticeship and training models and stronger support for working learners (Eurydice, 2025[10]).

Large shares of young people combining work and study can benefit the labour market as they can increase or reduce their hours on demand to cover peaks or emergencies in various sectors. Research suggests that exploiting student populations for work ultimately creates a complementary labour force that drives the development of local economies (Whittard, Drew and Ritchie, 2022[11]).For learners themselves, combining work with their studies offers valuable practical experiences that may help with transitions into full-time employment, as well as helping them build professional networks, resulting in positive labour-market outcomes especially when engaging in work related to their field of study (Geel and Backes-Gellner, 2012[12]). In some countries like Germany, Austria and Switzerland, where dual study systems that blend academics with apprenticeships are widespread, combining education with employment may even be part of the regular qualification process. Despite these benefits, work-study arrangements may limit the time students have for academic work, potentially affecting their learning outcomes or well-being.

Subnational variation in NEET rates

Within OECD countries, the share of 18-24 year olds who are neither in employment nor in education or training (NEET) can vary dramatically from one region to another. Subnational variation in the proportion of NEETs presents critical challenges for policymakers seeking to promote inclusive labour markets and equitable access to opportunities. The following analysis is of regions at the TL2 level, which are large subnational regions as defined by the OECD's official regional-classification grid (OECD, 2024[13]).

The most pronounced regional disparities in NEET rates emerge in Canada, Italy, Mexico and Türkiye where the gaps between the best- and worst-performing regions exceed 20 percentage points. In Canada, British Columbia reports a NEET rate of 9%, while Nunavut records 41% (a 32 percentage-point difference), signalling the need for region-specific labour-market strategies and social support in remote communities. Türkiye's gap (19% in Istanbul versus 48% percent in Eastern Anatolia – East) highlights regional disparities that may be influenced by differences in population density, infrastructure, access to employment opportunities, and access to education and training. (Table A2.4, available on line).

Conversely, Costa Rica, Ireland and Japan exhibit limited regional variation, with gaps of less than 5 percentage points between the best- and worst-performing regions. Ireland's NEET rates range from 8% (Northern and Western) to about 10% (Eastern and Midland), suggesting broadly uniform labour-market outcomes, while Japan ranges from 2% (Hokuriku) to about 5% (Chugoku) highlighting its generally low NEET incidence. In Costa Rica, the difference between Central (24%) and Huetar Caribbean (28%) also indicates modest disparities. Although countries with larger land areas or populations often exhibit wider subnational differences – as in Türkiye and Canada – size alone does not account for all the variation. Japan is large both geographically and demographically but has one of the smallest regional differences, whereas Greece – considerably smaller by both measures – faces a 19 percentage point divide. This contrast suggests that economic structures, education systems and social policies are more influential in driving NEET differences than country size. Targeted policies for specific regions are therefore essential to narrowing these gaps and ensuring that all young people have access to education and employment opportunities (Table A2.4, available on line).

Definitions

Educational attainment refers to the highest level of education successfully completed by an individual.

Employed, outside the labour force/inactive and unemployed individuals: See *Definitions* section in Chapter A3.

Individuals in education are those who are receiving formal education and/or training.

Levels of education: See the *Reader's Guide* at the beginning of this publication for a presentation of all ISCED 2011 levels.

NEET refers to young people neither employed nor in formal education or training.

Methodology

Data from the national labour force surveys usually refer to the second quarter of studies in a school year, as this is the most relevant period for knowing if the young person is really studying or has left education for the labour force.

This second quarter corresponds in most countries to the first three months of the calendar year (i.e. January, February and March), but in some countries to the second three months (i.e. April, May and June).

Education or training corresponds to formal education or training; therefore, someone not working but following non-formal studies is considered NEET. However, the definition of NEET is different for subnational data collection for countries taking part in the EU-LFS, where young adults who are in non-formal education or training are not considered to be NEET. For OECD EU countries, NEET rates by subnational region are therefore not comparable to the rates at national level presented in this chapter.

For further details, refer to the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018[14]) and the *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Source

For information on the sources, see Chapter A1.

Data on subnational NEET rates is from the OECD Regions and Cities databases http://oe.cd/geostats. Data on subnational NEET rates for Australia is from the Australian Bureau of statistics.

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Tables and Notes

Chapter A2 Tables

Table A2.1.	Share of young adults in education/not in education, by age group and labour-force status (2024)
Table A2.2.	Trends in the share of 18-24 year-olds in education/not in education, by work status and gender (2019 and 2024)
Table A2.3.	Share of young adults in education/not in education, by age group, labour-force status and duration of unemployment (2024)
Table A2.4. (web only)	Youth not in education and unemployed or outside the labour force (NEET), by subnational region (2024)

StatLink https://stat.link/zl34tq

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table A2.1. Share of young adults in education/not in education, by age group and labour-force status (2024)

Note: NEET refers to young people neither employed nor in education or training. Data usually refer to the second quarter of studies, which corresponds in most countries to the first three months of the calendar year, but in some countries, to the second three months. Columns with data for 25-29 year-olds are available for consultation on line.

1. Year of reference differs from 2024: 2022 for Chile; 2023 for Brazil, Iceland and the United States.

Table A2.2. Trends in the share of 18-24 year-olds in education/not in education, by work status and gender (2019 and 2024)

Note: NEET refers to young people who are neither employed nor in formal education or training. Data usually refer to the second quarter of studies, which corresponds in most countries to the first three months of the calendar year, but in some countries, to the second three months. Columns with data for the categories Total are available for consultation on line.

1. Year of reference differs from 2019: 2018 for Argentina; 2020 for Chile; 2022 for Bulgaria and Peru.
   Year of reference differs from 2024: 2022 for Chile; 2023 for Brazil, Iceland and the United States.

Table A2.3. Share of young adults in education/not in education, by age group, labour-force status and duration of unemployment (2024)

Note: The figures on duration of unemployment may not add up to the total for all unemployed because of missing data. Columns with data for 18-24 year-olds, and for duration of unemployment of less than 12 months are available for consultation on line.

1. Year of reference for duration of unemployment differs from 2024: 2021 for Brazil, Chile, Colombia, Iceland and the United States.
2. Year of reference for all other data differs from 2024: 2022 for Chile; 2023 for Brazil, Iceland and the United States.

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table A2.1. Share of young adults in education/not in education, by age group and labour-force status (2024)

In per cent; 18-24 year-olds

	In education						Not in education					Total
	Employed			Unemployed	Outside the labour force	Total	Employed	NEET			Total	
	Students in work-study programmes	Other employed	Total					Unemployed	Outside the labour force	Total		
OECD countries	(1)	(2)	(3)	(4)	(5)	(6) = (3) + (4) + (5)	(7)	(8)	(9)	(10)	(11) = (7) + (10)	(12) = (6) + (11)
Australia	5	30	36	2	11	49	39	4	8	12	51	100
Austria	8	15	23	2	25	49	38	5	8	13	51	100
Belgium	2	9	12	1	54	67	23	4	6	10	33	100
Canada	x(2)	24[d]	24	2	24	50	38	5	7	12	50	100
Chile[1]	x(2)	10[d]	10	5	40	55	25	6	14	20	45	100
Colombia	a	7	7	2	23	33	40	10	17	27	67	100
Costa Rica	a	11	11	2	29	42	34	10	15	24	58	100
Czechia	1	5	6	0	58	65	29	2	4	6	35	100
Denmark	x(2)	35[d]	35	6	16	56	34	4	6	11	44	100
Estonia	c	20	20	3	28	52	34	7	7	14	48	100
Finland	x(2)	23[d]	23	8	29	60	26	4	10	14	40	100
France	10	8	18	2	34	53	30	8	8	17	47	100
Germany	15	19	33	1	24	59	31	3	7	10	41	100
Greece	a	5	5	1	52	58	24	9	8	18	42	100
Hungary	1	4	5	0	47	53	32	6	9	15	47	100
Iceland[1]	a	36	36	4	14	53	42	1	3	5	47	100
Ireland	a	29	29	2	26	57	34	4	5	9	43	100
Israel	x(2)	9[d]	9	0	18	28	52	3	18	21	72	100
Italy	m	4	4	1	54	59	23	7	10	17	41	100
Japan	a	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	a	16	16	1	42	60	29	6	6	11	40	100
Lithuania	0	12	12	1	37	51	30	6	13	19	49	100
Luxembourg	a	c	c	c	51	64	26	c	c	c	36	100
Mexico	a	11	11	1	28	39	42	3	16	19	61	100
Netherlands	x(2)	51[d]	51	4	12	67	28	2	3	5	33	100
New Zealand	a	22	22	2	13	37	48	6	8	14	63	100
Norway	1	38	39	4	24	67	27	2	4	6	33	100
Poland	a	11	11	1	47	59	29	4	8	12	41	100
Portugal	a	6	6	2	46	55	30	9	6	15	45	100
Slovak Republic	c	6	6	c	56	62	26	7	5	12	38	100
Slovenia	m	23	23	2	42	67	25	3	6	8	33	100
Spain	x(2)	11[d]	11	3	46	60	22	9	8	18	40	100
Sweden	m	18	18	9	29	56	35	5	4	9	44	100
Switzerland	16	17	33	2	20	55	35	3	7	10	45	100
Türkiye	a	12	12	3	18	33	36	8	24	31	67	100
United Kingdom	5	12	17	1	24	43	41	5	10	16	57	100
United States[1]	x(2)	18[d]	18	1	25	44	42	4	10	14	56	100
OECD average	6	17	19	2	33	54	32	5	9	14	46	100
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[1]	a	18	18	4	15	37	39	8	16	24	63	100
Bulgaria	m	6	6	0	59	65	20	4	10	15	35	100
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	x(2)	4[d]	4	c	52	57	32	7	5	11	43	100
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	1	15	16	3	21	40	39	5	16	21	60	100
Romania	x(2)	1[d]	1	c	50	51	27	6	16	22	49	100
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	a	1	1	1	36	38	14	22	25	48	62	100
EU25 average	m	14	16	2	41	58	29	5	8	13	42	100
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A2.2. Trends in the share of 18-24 year-olds in education/not in education, by work status and gender (2019 and 2024)

In per cent

	In education				Not in education							
					Employed				NEET			
	2019		2024		2019		2024		2019		2024	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
OECD countries	(1)	(2)	(4)	(5)	(7)	(8)	(10)	(11)	(13)	(14)	(16)	(17)
Australia	49	53	45	53	39	36	42	36	12	11	13	11
Austria	44	51	46	53	44	38	41	35	11	10	13	12
Belgium	57	65	62	72	27	24	26	20	15	11	12	9
Canada	44	54	45	56	42	36	41	34	13	10	14	10
Chile[1, 2]	54	56	54	57	23	15	29	21	23	29	18	22
Colombia	32	32	32	33	50	30	49	31	18	38	19	36
Costa Rica	48	53	40	45	34	19	40	26	19	27	20	29
Czechia	m	m	61	68	m	m	35	23	m	m	4	9
Denmark	55	62	54	58	33	26	36	31	12	12	10	11
Estonia	51	62	54	50	41	28	29	38	8	11	16	12
Finland	55	61	59	62	32	27	27	25	13	12	15	13
France	51	57	49	58	31	26	33	27	18	16	19	15
Germany	62	64	57	61	30	27	33	28	7	9	9	11
Greece	62	67	54	62	17	13	27	21	21	20	18	17
Hungary	46	54	50	56	42	28	37	28	11	18	13	17
Iceland[2]	52	61	48	60	40	34	46	37	8	5	6	3
Ireland	53	57	57	58	34	32	34	34	13	11	9	9
Israel	27	33	26	30	56	48	54	50	17	18	21	21
Italy	48	57	52	67	26	18	30	16	26	25	17	18
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	49	70	57	62	36	23	34	24	15	7	9	14
Lithuania	58	64	48	54	30	24	32	28	12	12	19	18
Luxembourg	59	77	59	70	c	c	31	c	c	c	c	c
Mexico	38	38	38	41	53	29	53	31	9	33	9	28
Netherlands	63	65	66	69	30	31	30	26	7	5	5	6
New Zealand	33	33	36	39	55	52	50	46	12	15	14	15
Norway	45	59	62	71	47	34	31	23	9	8	6	6
Poland	51	60	54	64	39	26	34	25	10	13	12	12
Portugal	52	58	52	58	36	28	33	27	12	14	15	15
Slovak Republic	49	66	54	71	42	22	34	17	9	12	12	12
Slovenia	57	72	58	77	35	18	32	15	8	9	9	7
Spain	56	62	56	65	24	18	25	19	20	19	19	16
Sweden	54	63	50	62	38	30	39	30	9	8	11	8
Switzerland	54[b]	59[b]	52	58	35[b]	37[b]	37	33	10[b]	4[b]	11	9
Türkiye	42	35	31	34	36	23	46	24	22	42	22	42
United Kingdom	43	44	41	45	44	43	42	41	13	14	17	14
United States[2]	45	49	40	47	42	37	46	39	13	14	14	14
OECD average	49	55	49	56	36	27	35	28	13	15	13	15
OECD average for countries with available and comparable data for both years	50	56	50	57	37	29	36	29	13	15	14	15
Partner and/or accession countries												
Argentina[1]	43	51	m	m	38	20	m	m	19	29	m	m
Brazil[2]	30	33	33	40	47	31	48	30	23	37	19	29
Bulgaria[1]	58	65	59	71	26	16	26	14	15	19	14	15
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	42	58	50	64	42	27	39	24	16	16	11	11
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru[1]	35	39	39	41	49	36	43	34	15	24	17	25
Romania	48	55	49	54	37	22	35	18	15	22	16	28
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	41	42	37	39	18	12	17	12	41	47	46	49
EU25 average	53	62	55	63	34	25	33	25	13	14	13	13
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A2.3. Share of young adults in education/not in education, by age group, labour-force status and duration of unemployment (2024)

In per cent; 25-29 year-olds

	In education	Not in education							
		Employed	NEET						Total
			Unemployed				Outside the labour force		
			Less than three months	3 months to less than 12 months	12 months or more	Total			
OECD countries	(10)	(11)	(12)	(14)	(15)	(16)	(17)		(18) = (11) + (16) + (17)
Australia	16	72	m	m	1	3	9		84
Austria	21	67	m	m	m	4	8		79
Belgium	11	72	2	3	3	8	9		89
Canada	12	73	4	2	1	6	8		88
Chile[1, 2]	17	63	6	1	0	7	13		83
Colombia[1]	10	65	m	m	2	12	15		90
Costa Rica	19	56	4	2	0	8	18		81
Czechia	8	74	1	2	1	3	14		92
Denmark	29	59	2	1	1	4	8		71
Estonia	11	73	6	2	c	9	7		89
Finland	33	53	m	m	m	6	8		67
France	9	72	3	4	2	9	10		91
Germany	21	68	1	1	1	3	9		79
Greece	11	63	2	6	9	16	11		89
Hungary	7	80	1	1	1	5	8		93
Iceland[1, 2]	26	63	m	m	m	m	7		74
Ireland	13	72	3	1	1	5	9		87
Israel	25	59	0	1	1	3	13		75
Italy	18	58	2	2	4	8	15		82
Japan	m	m	m	m	m	m	m		m
Korea	m	m	m	m	m	m	m		m
Latvia	10	76	1	2	1	5	9		90
Lithuania	7	77	27	47	20	7	10		93
Luxembourg	13	74	m	m	m	c	c		87
Mexico	8	68	2	0	0	3	21		92
Netherlands	23	68	c	c	c	3	6		77
New Zealand	13	73	2	1	0	4	10		87
Norway	24	67	c	c	c	2	7		76
Poland	6	81	1	1	1	4	10		94
Portugal	13	73	m	m	2	7	6		87
Slovak Republic	8	77	1	2	3	6	9		92
Slovenia	19	73	1	1	1	3	5		81
Spain	17	61	5	4	3	12	10		83
Sweden	24	68	c	c	c	3	5		76
Switzerland	20	70	m	m	1	4	6		80
Türkiye	14	54	3	2	1	8	24		86
United Kingdom	11	75	1	1	1	3	11		89
United States[1, 2]	11	73	3	2	1	6	13		89
OECD average	15	69	3	4	2	6	10		85
Partner and/or accession countries									
Argentina	m	m	m	m	m	m	m		m
Brazil[1, 2]	19	59	m	m	m	m	16		81
Bulgaria	9	73	1	1	3	5	13		91
China	m	m	m	m	m	m	m		m
Croatia	11	73	1	2	1	7	9		89
India	m	m	m	m	m	m	m		m
Indonesia	m	m	m	m	m	m	m		m
Peru	11	70	m	m	m	m	13		89
Romania	5	71	1	2	2	5	19		95
Saudi Arabia	m	m	m	m	m	m	m		m
South Africa	7	38	3	5	11	32	23		93
EU25 average	14	70	3	5	3	6	10		86
G20 average	m	m	m	m	m	m	m		m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Chapter A3. How does educational attainment affect participation in the labour market?

Highlights

- Employment rates among 25-64 year-olds increase steadily with higher levels of tertiary attainment, reflecting strong labour-market returns to advanced qualifications. Individuals with a short-cycle tertiary qualification have an employment rate of 83%, compared to 86% for those with a bachelor's degree, 90% for those with a master's and 93% for those with a doctoral or equivalent qualification.
- Among unemployed adults aged 25-64, long-term unemployment is more prevalent among those with lower educational attainment: 36% of those with below upper secondary education have been unemployed for 12 months or more, compared to 30% with upper secondary or post-secondary non-tertiary education, and 25% with tertiary education.
- Adults' employment prospects depend both on educational attainment and numeracy proficiency, although the link highlighted by the second cycle of the Survey of Adult Skills is weaker than in the first cycle. Adults with tertiary education and high proficiency levels (at or above Level 4) are significantly more likely to be employed, while those with low educational attainment and weak proficiency levels (at or below Level 1) face much higher risks of unemployment or exclusion from the labour force.

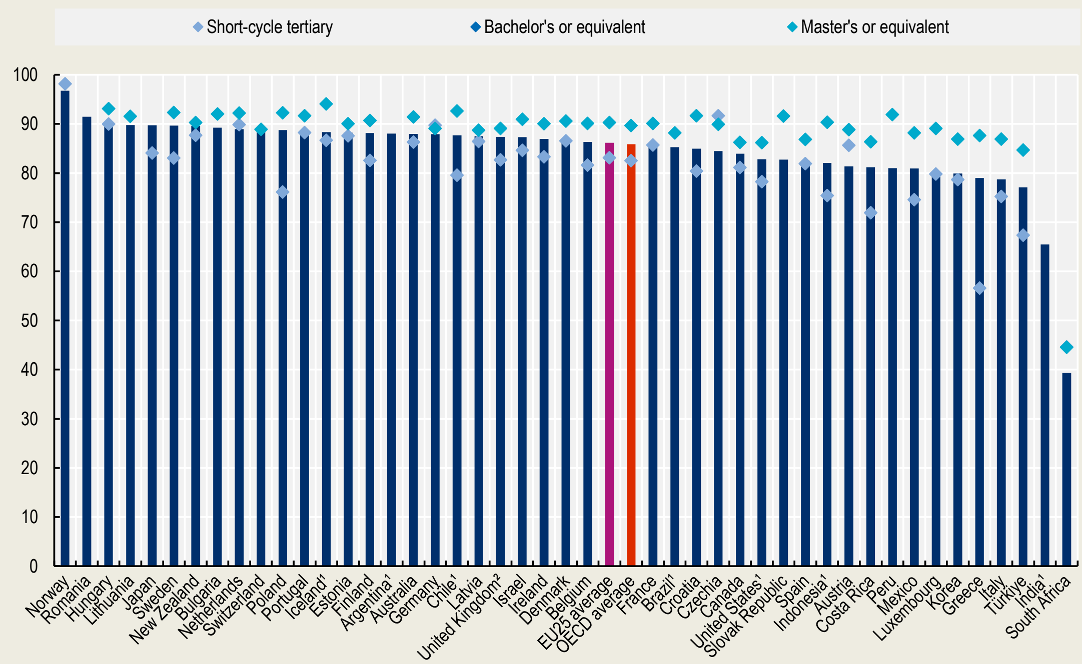
Context

Highly skilled workers remain vital for modern economies, and they in turn benefit from robust employment opportunities linked to their education (Box A3.2). These advantages, coupled with expanded educational opportunities, are some of the motivations for individuals across the OECD to pursue higher levels of education and acquire more skills. As demand for skills has increased, labour markets have successfully absorbed the growing number of highly skilled workers, providing them with better employment prospects. Conversely, adults with lower qualifications continue to face challenging labour-market prospects, lower earnings (see Chapter A4) and a greater risk of unemployment, exacerbated by growing automation and AI-driven labour-market transformations. Concurrently, the impact of ageing populations disproportionately affects low-educated older adults, often leading to early workforce exits and economic insecurity. Education systems must adapt proactively to these changes, preparing learners for an evolving labour-market landscape.

Among tertiary-educated adults, employment rates differ depending on their field of study and resulting careers. Careers in information and communication technologies (ICT) and engineering, manufacturing and construction often exhibit higher employment rates and wages. This serves as a motivation for some individuals to pursue careers in science, technology, engineering and mathematics (STEM).

Figure A3.1. Employment of tertiary-educated adults, by level of tertiary attainment (2024)

In per cent; 25-64 year-olds



1. Year of reference differs from 2024.
2. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (12% of adults aged 25-64 are in this group).
For data, see Table A3.1. For a link to download the data, see Tables and Notes section.

Other findings

In the vast majority of OECD countries, employment rates among young women (25-34 year-olds) are lower than among young men, regardless of educational attainment. However, the difference falls as educational attainment increases. On average across OECD countries, only 46% of 25-34 year-old women with below upper secondary attainment are employed, 25 percentage points below their male peers. The gap narrows to 15 percentage points for those with upper secondary or post-secondary non-tertiary attainment and to 6 percentage points for those with a tertiary degree.

- Among tertiary-educated adults, those who studied ICT have the highest average employment rate (90%) across the OECD, while the lowest rates are found among those who studied arts and humanities, social sciences, journalism and information (84%).
- The unemployment rate for adults with tertiary education is as low as or lower than the unemployment rate for adults with upper secondary or post-secondary non-tertiary education in almost all OECD and partner countries except Denmark, Mexico, the Netherlands, South Africa and Switzerland.
- The field of study matters more for the employment prospects of adults with lower numeracy proficiency than for those with higher skills. Employment rates vary widely, with particularly low rates for adults with a tertiary education in arts and humanities and also, in some countries, for education and for business, administration and law. In contrast, employment rates among adults with high numeracy proficiency levels tend to converge across fields.

Note

People of working age can be classified into three groups based on their labour-force status: employed, unemployed and those outside the labour force (also referred to as inactive). The employed and unemployed together make up the labour force, which represents the total supply of labour available to contribute to economic production. Individuals who are neither employed nor actively seeking work are considered outside the labour force and are not included in the labour supply.

Analysis

There continues to be a strong relationship between labour-market participation and educational attainment that holds whether participation is measured by employment, unemployment or inactivity rates. This relationship exists in nearly all OECD and partner countries with available data. It is very rare to find a country where a subpopulation with lower educational attainment has higher labour-market participation rates than a subpopulation with higher educational attainment. This positive relationship between education and the labour market holds for both men and women and has been stable over the decades, against the backdrop of the strong increase in attainment levels across the OECD (Table A3.2).

When analysing employment rates by educational attainment, it is clear that educational pathways are not always linear. In some cases, individuals may pursue upper secondary or post-secondary non-tertiary programmes, even if they already hold a tertiary qualification, to acquire the necessary skills for the labour market. As labour-market needs constantly evolve, individuals must continuously upskill and reskill. To do so, they may choose to pursue further education at a different level or engage in informal or non-formal learning (see Chapter A5).

Educational attainment and employment rates

Across countries, there are substantial variations in employment rates by level of education. The highest employment premiums for tertiary-educated adults over those with upper secondary or post-secondary non-tertiary education are in Lithuania and Poland, where the difference between employment rates is 16 percentage points in both countries. Conversely, in Czechia and Iceland, the average employment premium for tertiary-educated adults is 4 percentage points or less over those with upper secondary or post-secondary non-tertiary education (Table A3.1). These disparities suggest that the labour-market value of tertiary qualifications depends not only on the level of education attained but also on national economic conditions, demand for skills and the structure of secondary and post-secondary education systems.

Within tertiary education, employment rates among 25-64 year-olds rise with higher levels of tertiary attainment, from 83% for short-cycle tertiary programmes to 93% for doctoral or equivalent qualifications (Figure A3.1). This pattern reflects the increasing demand for advanced skills and qualifications in OECD and partner countries' labour markets. Higher levels of education often signal specialised expertise, which can improve employability and access to more stable or higher-paying jobs. Although advanced degrees tend to offer better employment outcomes on average, the returns may vary depending on the match between qualifications and labour-market needs.

This overall picture must also be viewed in the context of generational shifts in educational attainment. In all OECD and partner countries, younger adults (aged 25-34) are better educated than the wider adult population (aged 25-64) (see Chapter A1). However, their employment patterns remain similar on average across OECD countries: 87% of both tertiary-educated younger adults and all adults are employed, as are 79% of younger adults with upper secondary or post-secondary non-tertiary attainment and 60% of younger adults with below upper secondary attainment (compared to 79% of all adults) (Table A3.1 and Table A3.2).

The employment gains for increasing educational attainment are particularly pronounced for women. Young women (25-34 year-olds) with an upper secondary or post-secondary non-tertiary qualification have an employment rate that is 24 percentage points higher than those with below upper secondary attainment, compared to a 14 percentage points increase among young men. The advantage for young women of attaining tertiary education is even more pronounced: their employment rate rises by a further 13 percentage points compared to those with only upper secondary attainment whereas for young men the increase is only 5 percentage points (Table A3.2).

However, young women remain disadvantaged in the labour market with lower employment rates than their male peers at all levels of educational attainment. Women aged 25-34 with below upper secondary attainment have employment rates of 46% on average across the OECD, compared with 71% for similarly educated young men. Among tertiary-educated young adults, the gap in favour of men narrows to 6 percentage points (Table A3.2). These persistent disparities underscore the importance of addressing gender-specific barriers to employment, even as progress in educational attainment continues.

Information on the quality of jobs and working conditions for Research and Innovation (R&I) professionals plays a decisive role in driving personal development decisions, career choices and informing policies oriented towards nurturing, attracting and retaining talent (Box A3.1).

Employment and fields of study

Employment rates for adults with tertiary attainment are high across all fields, but there are small differences depending on what graduates chose to study. Overall, the STEM fields have the strongest employment outcomes. Within these fields, employment rates are highest for people who studied ICT; on average 90% of adults (25-64 year-olds) with a tertiary ICT degree are in employment in OECD countries. Similarly, the average employment rate of graduates in engineering, manufacturing and construction is very high at 89%. Education has an average employment rate that is somewhat lower, but still high at 87%. Arts and humanities, social sciences, journalism and information is the broad field of study with the lowest employment rates among tertiary-educated 25-64 year-olds, at an average of 84%. To put this into perspective, this employment rate is still 7 percentage points higher than the average for those with upper secondary or post-secondary non-tertiary attainment across the OECD (Table A3.1 and Table A3.3).

Although the differences in employment rates between fields of study are small, they are very consistent across OECD countries. For example, employment rates for adults with tertiary attainment in ICT are higher than for those with tertiary attainment in arts and humanities and social sciences, journalism and information in all OECD countries. Within the STEM fields, graduates in natural sciences, mathematics and statistics tend to have lower employment rates than other STEM fields in almost all countries. The gap is especially large in Costa Rica, where the employment rate is on average approximately 11 percentage points lower for adults with a qualification in natural sciences, mathematics and statistics than for those who studied ICT (Table A3.3).

Box A3.1. Working conditions of doctorate holders – Evidence from the new Research and Innovation Careers Observatory

In June 2025, the OECD launched the Research and Innovation Careers Observatory (ReICO) online platform (OECD, 2025[1]). This is the first major output of a new multi-year initiative with the European Union, aiming to support evidence-based policy making to strengthen the development of research and innovation (R&I) talent, improve labour-market conditions, and promote mutually beneficial talent circulation.

ReICO provides internationally comparable statistics on research and innovation careers across interconnected themes that reflect the full working lives of R&I talent while also highlighting measurement gaps for the ReICO project to address in partnership with relevant communities.

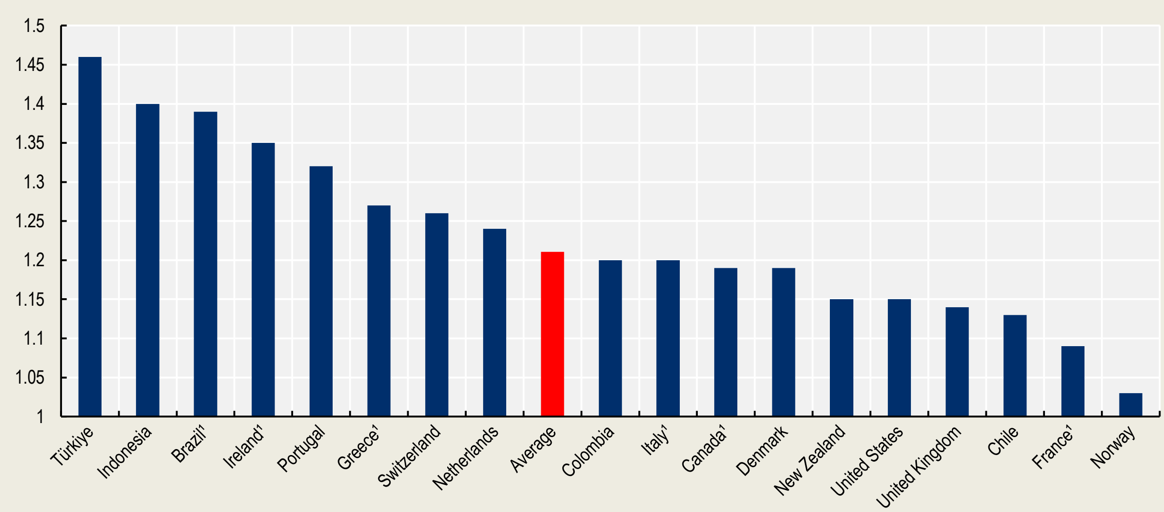
The 2025 edition draws mainly on existing official statistics, including OECD education and training data collections, and the outcomes of a dedicated ReICO 2024 data collection on the career outcomes of doctorate holders, benchmarked against those of master's graduates (Table A3.12, available on line). Doctoral education plays a key role in R&I talent development systems, as it explicitly prepares and accredits individuals to conduct and manage research. The platform therefore offers valuable insights into the working conditions and career paths of these individuals.

Earnings

Across the countries for which data are available, doctorate holders typically benefit from a notable earnings advantage over those with master's degrees. In the Republic of Türkiye, employed doctorate holders earn 46% more on average than those with a master's degree, although in France and Norway the relative earnings advantage is less than 10% (Figure A3.2). Although earnings might not be the sole factor in driving individuals' decisions to pursue a doctorate and might not represent a positive rate of return on investment in all cases, this premium underscore the value attributed by the labour market to advanced research skills in some fields.

Figure A3.2. Relative earnings of doctorate holders (2023)

Ratio of the average gross annual earnings of employed doctorate holders to those of employed master's degree holders; 25-64 year-olds



Note: The average includes only OECD countries, i.e. Brazil and Indonesia are excluded from the calculation.
1. Year of reference differs from 2023: 2022 for Ireland and Italy; 2021 for Brazil and Canada; 2020 for Greece and France.
For data, see Table A3.12, available on line. For a link to download the data, see Tables and Notes section.

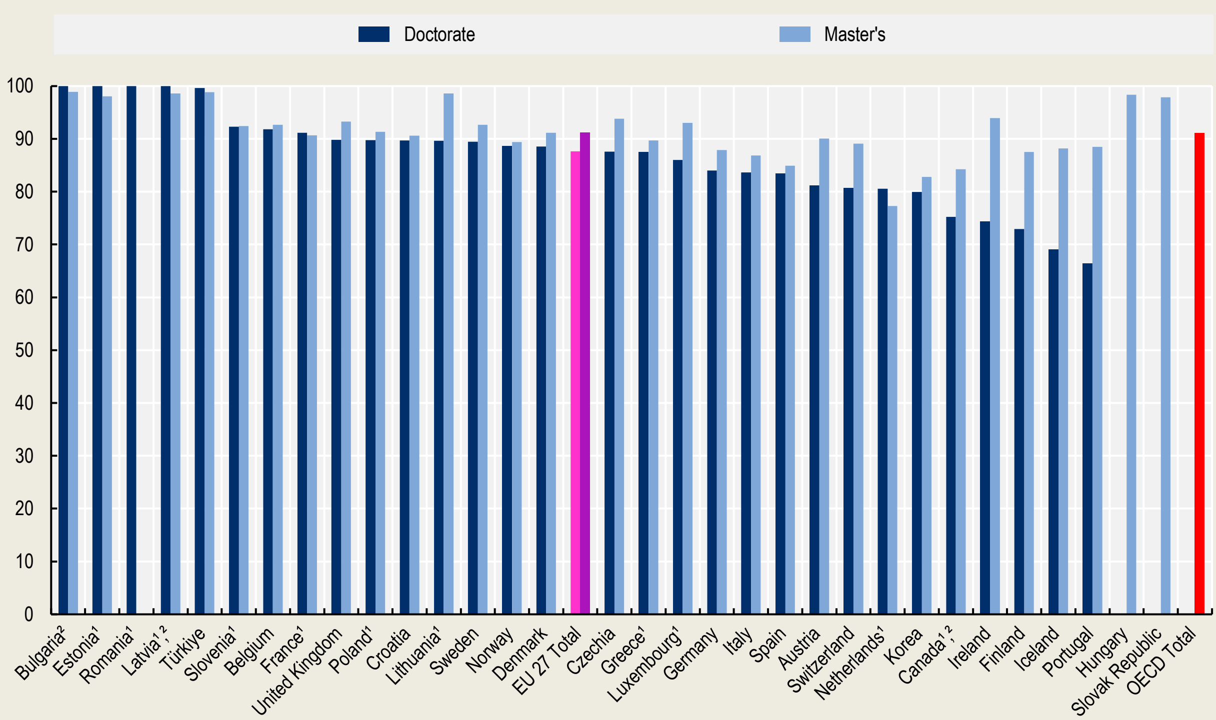
Job Security

Employment stability can be an important factor in attracting and, especially, retaining high-level talent, particularly if remuneration is capped. The share of employed doctorate holders with indefinite contracts remains slightly below that for master's holders in most countries (Figure A3.3).

Precarious employment has profound consequences for individuals' career planning, well-being and the ability to undertake long-term projects. In addition, fixed-term roles often prevent individuals from finding stable housing, planning their families and pursuing sustained research agendas. Although indefinite contracts may offer different levels of job security, this gap suggests potential areas for policy improvement to enhance work conditions and thus the attractiveness of careers for doctorate holders (Auriol, 2013[2]). In response, many OECD countries are implementing structural reforms such as expanding tenure-track positions, improving access to permanent contracts and enhancing pathways to move into non-academic sectors (OECD, 2023[3]).

Figure A3.3. Job security of individuals with advanced qualifications, by level of tertiary attainment (2023)

Share of employed doctorate and master's degree holders who are in indefinite contracts; 25-64 year-olds



1. Year of reference differs from 2023 for doctorate holders: 2022 for Estonia, France, Lithuania, Luxembourg and Romania; 2021 for Canada, Greece and Slovenia; 2019 for Latvia, Netherlands and Poland.
2. Year of reference differs from 2023 for master's holders: 2022 for Bulgaria; 2021 for Canada; and 2020 for Latvia.
For data, see Table A3.12, available on line. For a link to download the data, see Tables and Notes section.

Working Hours

Doctorate holders generally work slightly more hours – approximately 2% more per year – than those with master's degrees (Table A3.13, available on line). This difference might reflect increased responsibilities and more competitive working environments typically associated with doctoral-level positions. In academic research careers, this workload intensity is associated with heightened stress – and is especially pronounced in early-career positions where teaching, grant-writing and lab duties overlap (OECD, 2021[4])

The ReICO 2024 data collection highlights both the strong points and areas for further attention regarding working conditions for doctorate holders, informing policies that aim to foster sustainable and attractive research and innovation careers, as well as talent development early on in education and training systems.

Subnational variations in employment rates

Within OECD countries, employment rates among adults (25-64 year-olds) can vary dramatically from one region to another. These subnational variations present critical challenges for policy makers seeking to promote inclusive labour markets and equitable access to opportunities. The following analysis is of regions at the TL2 level, which are large subnational regions as defined by the OECD's official regional-classification grid (OECD, 2023[5]).

On average across OECD countries, regional disparities in employment rates are markedly larger for adults with lower educational attainment. In Italy, for instance, only 37% of 25-64 year-olds with below upper secondary education are employed in Campania, compared to 75% in the Autonomous Province of Bolzano in 2024 – a difference of 39 percentage points. In contrast, among tertiary-educated adults, employment rates range from 71% in Calabria to 91% in Aosta Valley, a much narrower 20 percentage-point spread (Table A3.13, available on line).

The most pronounced regional disparities in employment rates among tertiary-educated adults are in Canada, Italy and Mexico where the gap between the best- and worst-performing regions exceeds 12 percentage points. In contrast, regional differences in employment rates for tertiary-educated adults do not exceed 1 percentage point in Lithuania, Norway and Slovenia (Table A3.13, available on line).

Among partner countries, Romania has a significant range of employment outcomes by region and education levels. In 2024, only 33% of adults with below upper secondary education were employed in Centru compared to 59% in Bucharest – Ilfov. Among tertiary-educated adults, the disparity narrows, with employment rates ranging from 89% to 93% across regions (Table A3.13, available on line).

Educational attainment, unemployment rates and duration of unemployment

Higher educational attainment continues to shield individuals from unemployment. In many OECD and partner countries, unemployment rates are especially high among younger adults with lower attainment. On average across OECD countries, the unemployment rate for younger adults with below upper secondary attainment is 13%, almost twice as high as for those with upper secondary or post-secondary non-tertiary attainment (7%). The unemployment rate for tertiary-educated younger adults is only 5% (Table A3.4).

The situation is especially severe for younger adults with below upper secondary attainment in the Slovak Republic and South Africa, where about 40% are unemployed. The unemployment rate is also high for this group in Finland, Greece and Spain where at least 20% are unemployed (Table A3.4).

Having attained upper secondary education or post-secondary non-tertiary education reduces the risk of unemployment in most OECD and partner countries. In Austria, Bulgaria, Czechia, Hungary, Romania and the Slovak Republic, the unemployment rate for younger adults with upper secondary or post-secondary non-tertiary education as their highest attainment is less than one-third the rate of younger adults with below upper secondary attainment (Table A3.4).

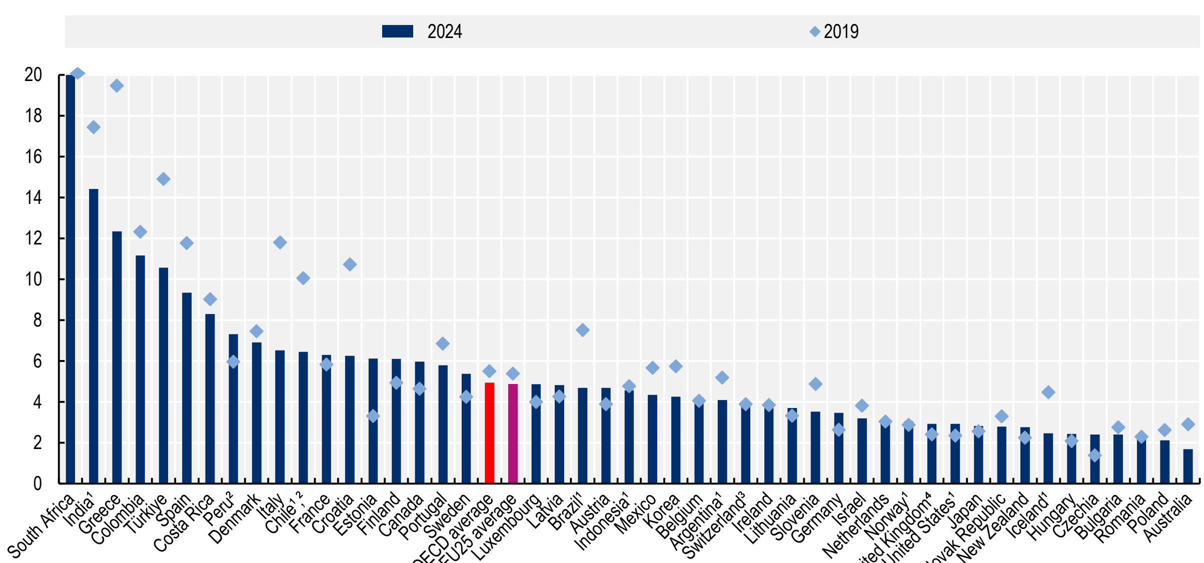
Unemployment rates are often used as a proxy for labour-market health. However, this measure can be misleading if interpreted in isolation. Unemployment only measures those without a job who are actively seeking work. It excludes individuals who are out of work but not currently searching – those who are classified as inactive or outside the labour force (see next section). This distinction matters. In some countries, low unemployment rates coexist with high inactivity rates. This is often driven by discouraged workers – people who would like to work but have stopped searching due to repeated failure, lack of opportunities, or structural barriers such as poor childcare support or health issues. In such cases, a low unemployment rate can obscure significant labour-market dysfunction.

Overall, the average unemployment rate of 25–34 year-old adults in OECD countries has fluctuated significantly over the past two decades, with notable peaks in 2005, between 2010 and 2013 following the 2008/09 financial crisis, and again in 2020/21 as a consequence of the COVID-19 pandemic. This pattern was observed across most OECD countries and across all levels of education, although the magnitude of the increases and decreases varied depending on attainment level and on the specific countries. Tertiary-educated young adults, for example, were better shielded from negative labour market shocks, experiencing lower overall unemployment rates and less pronounced spikes. On average across the OECD, the unemployment rate among young adults without an upper secondary education rose by 7 percentage points between 2008 and 2010 and remained relatively elevated until 2013. In contrast, the increase among tertiary-educated 25–34 year-olds was more moderate, rising by just 3 percentage points between 2008 and 2013 (OECD, 2025[6]).

By 2023/24, unemployment rates for young adults had generally returned to pre-pandemic levels. In the most recent years for which data are available, the unemployment gap between tertiary-educated individuals and those with lower educational attainment has slightly narrowed but remains broadly in line with and does not break from long-term trends. The following paragraphs provide a cross-country overview of recent unemployment figures compared to pre-COVID-19 levels.

Figure A3.4. Trends in unemployment rates of tertiary-educated 25-34 year-olds (2019 and 2024)

In per cent



1.Year of reference differs from 2024.
2.Year of reference differs from 2019.
3.Break in time series between 2019 and 2024.
4.Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (9% of adults aged 25-34 are in this group).
For data, see Table A3.4. For a link to download the data, see Tables and Notes section.

On average across OECD countries, unemployment rates have decreased or remained stable between 2019 and 2024 for each level of attainment. However, in a few countries, such as Finland and Romania, the unemployment rate for 25-34 year-old adults who have not attained upper secondary education has increased by at least 6 percentage points between 2019 and 2024. Argentina and Italy show the opposite pattern: the unemployment rate among 25-34 year-olds with below upper secondary attainment has fallen by at least 6 percentage points between 2019 and 2024. However, this figure should be interpreted with caution, as this country has seen the inactivity rate of those with below upper secondary attainment increase over the same period (Table A3.4).

Despite tertiary attainment rates among 25-34 year-olds increasing from 45% in 2019 to 48% in 2024 on average across OECD countries (see Chapter A1), there are few signs that the labour-market benefits of a tertiary degree are diminishing. Among 25-34 year-olds, the average gap in unemployment rates between those with tertiary attainment and those with lower levels of attainment is almost the same in 2024 as it was in 2019. In aggregate across the OECD, the labour market has absorbed a growing number of tertiary-educated workers without any noticeable effect on their unemployment rates (Figure A3.4, Table A3.4 and see Table A1.2).

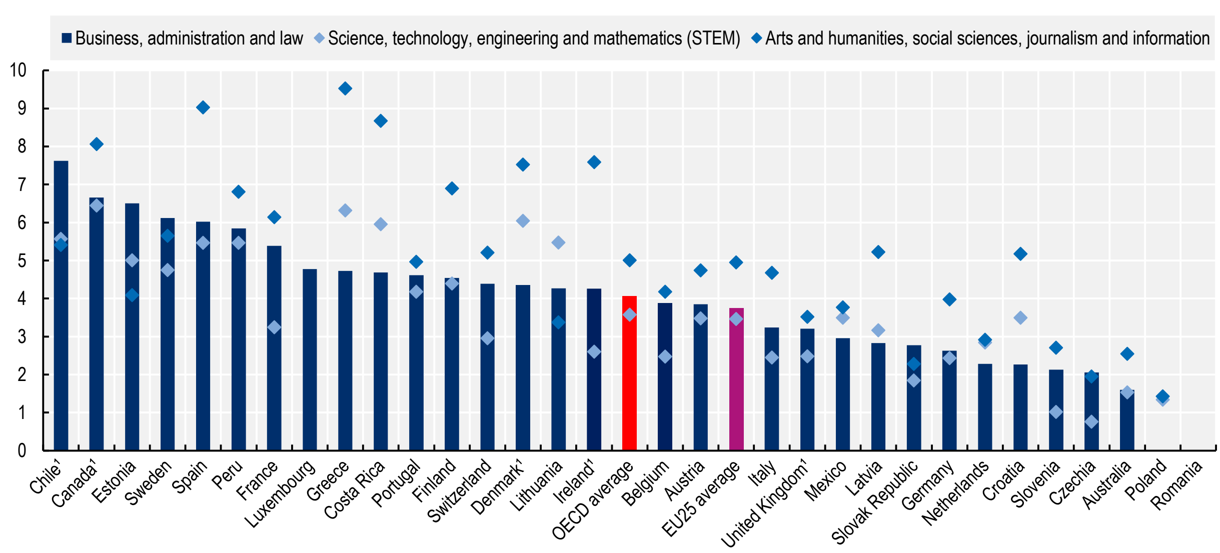
Unemployment rates and fields of study

Although unemployment rates can be low for tertiary-educated adults across all fields, they still show notable variation by field of study, particularly in some countries. Within individual countries, the largest differences between unemployment rates across fields of study are in Costa Rica, where unemployment rates among tertiary-educated adults can vary by more than 35 percentage points, depending on the fields they studied. The remaining OECD countries have smaller differences between fields (Figure A3.5 and Table A3.6, available on line).

Although the differences in unemployment rates between fields of study are small, they are very consistent across OECD countries. For example, unemployment rates for adults with tertiary attainment in ICT are lower than for those with tertiary attainment in arts and humanities and social sciences, journalism and information in all but six OECD countries. STEM tertiary-educated graduates tend to have the lowest unemployment rates on average across OECD countries, compared to other fields (Table A3.6, available on line).

Figure A3.5. Unemployment rates of tertiary-educated adults, by field of study (2024)

In per cent; 25-64 year-olds



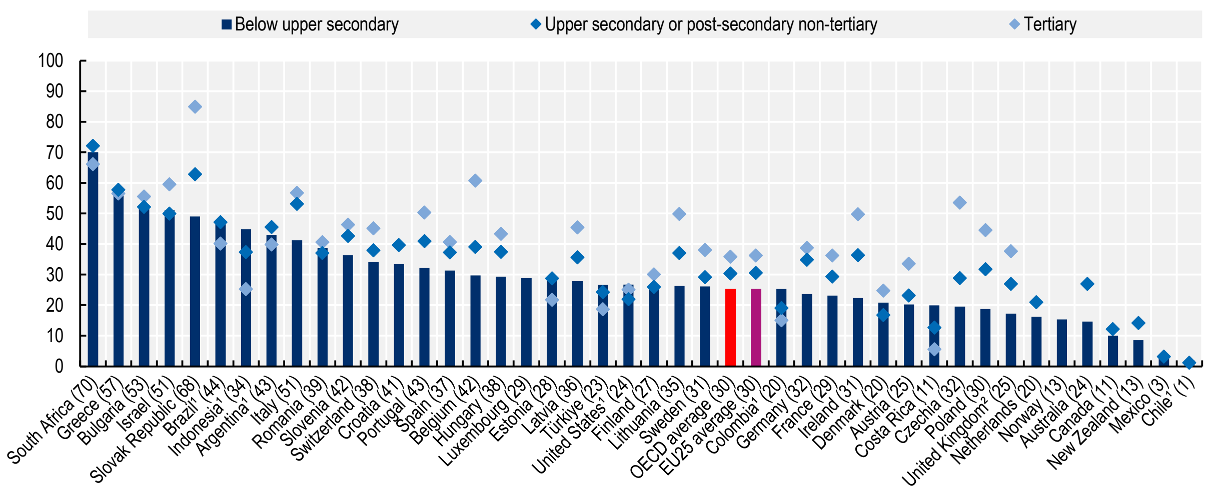
1. Year of reference differs from 2024.
For data, see Table A3.6 (available on line). For a link to download the data, see Tables and Notes section.

Duration of unemployment

How long people remain unemployed offers a wider perspective on labour-market difficulties than overall unemployment rates. Duration of unemployment tends to decrease with higher educational attainment. On average across the OECD, 25% of unemployed adults with tertiary attainment have been unemployed for 12 months or longer, compared to 30% of those with upper secondary or post-secondary non-tertiary attainment and 36% of those with below upper secondary attainment. Tertiary-educated adults have a lower incidence of long-term unemployment than adults with lower levels of educational attainment in about two-thirds of OECD countries. However, Figure A3.6 shows only the share of long-term unemployment relative to unemployed adults. In countries with higher overall unemployment, the total number of long-term unemployed – particularly among those with lower education levels – can be significantly higher than the relative shares suggest (Figure A3.6).

Figure A3.6. Long-term unemployment (12 months or more) among unemployed adults, by educational attainment (2024)

In per cent; 25-64 year-olds



Note: The numbers in parentheses represent the aggregated long-term unemployment rates across all levels of education
1. Year of reference differs from 2024.
2. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (12% of adults aged 25-64 are in this group).
For data, see Table A3.5. For a link to download the data, see Tables and Notes section.

Most unemployment is short term as the unemployed usually find new jobs within a few months. However, this pattern does not hold for unemployed adults with below upper secondary attainment. Among this group, 36% have been unemployed for more than 12 months compared to 30% who have been unemployed for 3-12 months and 34% who have been unemployed for less than 3 months. This contrasts with individuals who have completed upper secondary or tertiary education, where long-term unemployment (12 months or more) remains less common than shorter spells. Among unemployed tertiary-educated adults, the share of long-term unemployed is significantly lower (25%) compared to those unemployed for 3-12 months (35%), highlighting that individuals with higher levels of education, particularly those with tertiary qualifications, are less likely to remain unemployed for extended periods (Table A3.5).

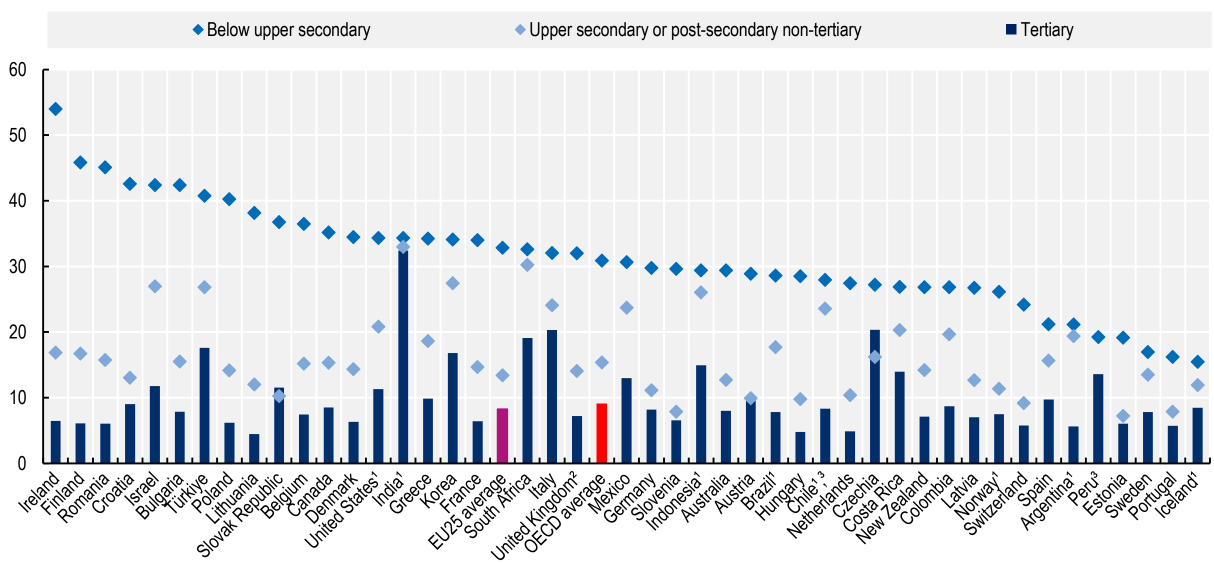
Educational attainment and adults outside the labour force

Labour-market inactivity, or individuals who are neither employed nor seeking employment, also differs significantly by educational attainment. On average, the inactivity rate among young adults (25-34 year-olds) in 2024 was 9% for those with tertiary attainment, compared to 15% for those with upper secondary or post-secondary non-tertiary attainment and 31% for those with below upper secondary attainment (Figure A3.7). These differences underscore the persistent labour-market disadvantages faced by low-educated individuals. In particular, young adults with below upper secondary attainment are over three times more likely to be outside the labour force than their tertiary-educated peers.

Despite the relatively low average for tertiary-educated young adults, labour-market inactivity rates among this group can vary widely across OECD and partner countries – from as low as 4% in Lithuania to 32% in India (Table A3.4). High inactivity rates can indicate deep structural challenges, such as long-term exclusion from the labour market, skills mismatches, health inequities or ineffective job matching systems. These conditions may reduce economic output, worsen inequality and erode individual well-being. High inactivity rates can also reflect social norms around gender roles and caregiving responsibilities.

Figure A3.7. Shares of 25-34 year-olds outside the labour force, by educational attainment (2024)

In per cent



1.Year of reference differs from 2024.
2.Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (9% of adults aged 25-34 are in this group).
3. Year of reference differs from 2019.
For data, see Table A3.4. For a link to download the data, see Tables and Notes section.

Labour-market inactivity is correlated to prolonged illnesses. Studies indicate a strong correlation between poor health and inactivity, with over one-third of economically inactive individuals in the United Kingdom experiencing long-term health issues (Crawshaw et al., 2024[7]). Those with long-term illnesses consistently exhibit lower labour-market participation and higher unemployment rates compared to their healthier counterparts. Among the economically inactive, those who are long-term sick are more likely to want to work but less likely to actively seek or secure a job, and the shift to homeworking during the pandemic has not reduced these disparities (Haskel and Martin, 2022[8]).

Box A3.2. Labour-market status by educational attainment and numeracy proficiency

Before the OECD Survey of Adult Skills (a product of the Programme for the International Assessment of Adult Competencies; PIAAC), few studies had explored the labour-market returns to skills independent of formal educational attainment. Instead, qualifications were typically used as proxies for skill levels, blurring the distinction between what individuals know and what credentials they hold (OECD, 2024[9]; Barro and Lee, 2013[10]; Hanushek and Woessmann, 2011[11]). While there are sound theoretical reasons to expect a correlation – more skilled individuals are more likely to pursue further education, and education itself develops skills – this relationship is not deterministic. Education may also serve as a signal of ability or a way to navigate employers' screening processes, rather than solely reflecting the acquisition of skills (OECD, 2024[9]) .

The Survey of Adult Skills Cycle 2 (OECD, 2024[9]) confirms that both education and skills are positively associated with employment status. Individuals with higher proficiency are more likely to be employed, and employment itself can offer further opportunities to develop skills. However, the strength of this association varies across countries, potentially reflecting differences in the "skills transparency" of qualifications – that is, how accurately formal credentials signal actual skills.

Across participating OECD countries and economies, the Survey of Adult Skills found that average proficiency in literacy, numeracy and adaptive problem solving is consistently higher among employed adults than among those who are unemployed or inactive. High-skilled individuals are also less likely to face unemployment. On average, a one standard deviation increase in numeracy proficiency (58 points) is associated with a 4 percentage point increase in the likelihood of participating in the labour market (OECD, 2024[9]). However, the link between skills, education and employment has weakened compared to ten years ago, when most countries participated in the first cycle of the Survey. The analysis shows that in countries where unemployment fell between 2012 and 2023, the association between numeracy proficiency and employment also diminished. This suggests that tighter labour markets in 2022/23 may have reduced the relative advantage of higher skills, bringing more individuals into employment regardless of their proficiency. It is worth noting, however, that not all the effects found are statistically significant at the 5% level (OECD, 2024[9]).

Data from the Survey of Adult Skills Cycle 2 confirm the link between labour-force status and both educational attainment and numeracy proficiency. Adults with tertiary education and high proficiency levels (at or above Level 4) are significantly more likely to be employed, while those with low educational attainment and low proficiency levels (at or below Level 1) face much higher risks of unemployment or exclusion from the labour force. These findings reaffirm the dual importance of formal qualifications and functional skills in ensuring employability and labour-market resilience (OECD, 2024[9]).

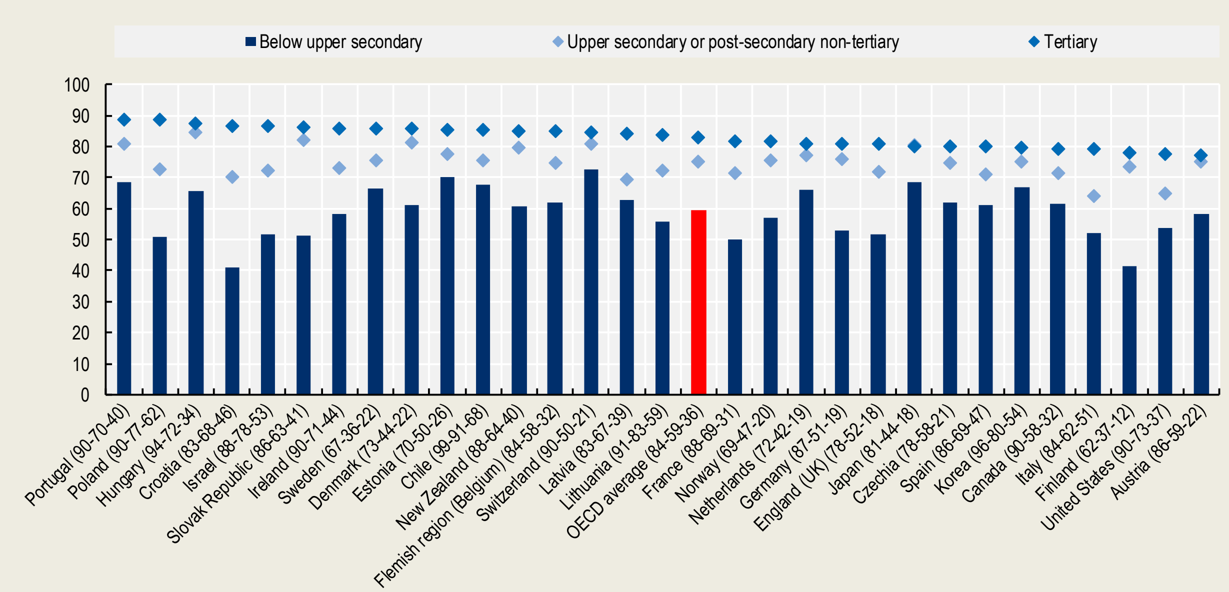
The positive correlation between educational attainment and employment among 25-64 year-olds is illustrated in Figure A3.8. Across the countries and economies taking part in the Survey of Adult Skills Cycle 2, employment rates rise with educational attainment even when the numeracy skills is the same at or below Level 2: 60% for those with below upper secondary education, 75% for those with upper secondary or post-secondary non-tertiary attainment and 83% for those with tertiary education.

There is also a positive correlation between numeracy proficiency and employment among 25-64 year-olds. Across the countries and economies taking part in the Survey of Adult Skills Cycle 2, employment rates rise with each proficiency and educational attainment level. This steep gradient reflects the central role of skills in enabling adults to perform effectively in the labour market. On average across the OECD, the employment rate for adults with numeracy proficiency at or below Level 1 ranges from 56% for those with below upper secondary attainment to 70% for those with upper secondary or post-secondary non-tertiary qualifications and 77% for tertiary-educated adults. For adults with numeracy proficiency at Level 2 and 3, employment rates range from 67% (Level 2) and 73% (Level 3) for those with below upper secondary attainment to 85% (Level 2) and 89% (Level 3) for those with a tertiary qualification. At the highest levels of proficiency (at or above Level 4), the employment rate reaches 88% on average for upper secondary or post-secondary non-tertiary educational attainment and 92% for tertiary attainment (Table A3.7, available on line).

Although the positive relationship between education, skills and employment prospects is observed across all participating countries, the magnitude of the difference varies considerably. In Croatia and Israel, employment rates among tertiary-educated adults are at least 30 percentage points higher than among those with below upper secondary attainment across all numeracy proficiency levels – suggesting a strong impact of educational attainment. In contrast, in Austria, Czechia and the Netherlands, adults with numeracy proficiency at or above Level 4 have employment rates that are at least 24 percentage points higher than those scoring at or below Level 1, regardless of their level of education. In these countries, proficiency appears to have a stronger association with employment outcomes than formal qualifications (Table A3.7, available on line).

Figure A3.8. Employment rates of adults with numeracy proficiency at or below Level 2, by educational attainment (2023)

Survey of Adult Skills (PIAAC); 25-64 year-olds; in per cent



Note: The numbers in parentheses represent the shares of 25-64 year-olds in employment with numeracy proficiency at or below Level 2 among those with below upper secondary attainment, with upper secondary or post-secondary non-tertiary education, and with tertiary education respectively.

For data, see Table A3.9 (available on line) and Table A3.11 (available on line). For a link to download the data, see Tables and Notes section.

Trends in employment, by educational attainment and numeracy proficiency

Table A3.8, available on line, tracks changes in employment rates between 2012 and 2023 across different levels of educational attainment and numeracy proficiency. Overall, adults with higher levels of education and proficiency were more likely to experience stable or improved labour-market outcomes. In many countries, employment rates increased for tertiary-educated adults with proficiency at or above Level 3, even amid global economic disruptions. In contrast, employment rates stagnated or declined for adults with low proficiency (at or below Level 1), particularly among those who had not completed upper secondary education.

Country-level data show important differences. In Estonia, New Zealand and Sweden, employment among low-educated adults with proficiency Level 3 remained relatively strong, reflecting more inclusive labour markets. In contrast, England (United Kingdom), Finland and France display persistently low employment rates among adults with both low educational attainment and low proficiency. These variations suggest that while skills matter universally, national education systems and labour-market structures play a key role in shaping how proficiency translates into employment opportunities (Table A3.8, available on line).

Employment, by field of study and numeracy proficiency

Among tertiary-educated adults, field of study significantly influences employment outcomes, especially when combined with numeracy proficiency. On average across OECD countries, the employment rate ranges from 80% to 94% among adults who studied in the field of education, depending on their numeracy level; from 77% to 90% for those who studied arts and humanities, social sciences, journalism and information; from 79% to 92% for business, administration and law; from 81% to 93% for STEM fields; and from 80% to 93% for those in health and welfare fields. Within each country and among adults who studied the same field, those with higher numeracy proficiency consistently achieve higher employment rates (Table A3.10, available on line).

Patterns relating to the field of study differ across countries, underscoring the importance of aligning education and skills development with local labour-market demand. The field of study seems to matter more for the employment prospects of adults with lower numeracy proficiency than for those with higher skills. Among low-proficiency adults, employment rates vary widely depending on the field, with particularly low rates for arts and humanities and also in some countries for education and for business, administration and law. In contrast, employment rates among adults with high numeracy proficiency levels tend to converge across fields, suggesting that strong numeracy skills may compensate for any mismatch between labour-market demand and fields of study. These findings highlight the role of national education and skills policies in shaping demand for qualifications and skill profiles, as well as the importance of skills-based curricula and career guidance to help graduates succeed in the labour market (Table A3.10, available on line).

Definitions

Age groups: Adults refer to 25-64 year-olds. **Younger adults** refer to 25-34 year-olds. **Older adults** refer to 55-64 year-olds.

Educational attainment refers to the highest level of education successfully completed by an individual. See the *Reader's Guide* at the beginning of this publication for a presentation of all ISCED 2011 levels.

Employed individuals are those who, during the survey reference week, were either working for pay or profit for at least one hour or had a job but were temporarily not at work. The employment rate refers to the number of persons in employment as a percentage of the population.

Fields of study are categorised according to the ISCED fields of education and training (ISCED-F 2013). See the *Reader's Guide* for full listing of the ISCED fields used in this report.

Inactive individuals/those outside the labour force are those who, during the survey reference week, were outside the labour force and classified neither as employed nor as unemployed. Individuals enrolled in education are also considered as inactive if they are not looking for a job. The inactivity rate refers to inactive persons as a percentage of the population (i.e. the number of inactive people is divided by the number of the population of the same age group).

Labour force (active population) is the total number of employed and unemployed persons, in accordance with the definition in the Labour Force Survey.

Unemployed individuals are those who, during the survey reference week, were without work, actively seeking employment and currently available to start work. The unemployment rate refers to unemployed persons as a percentage of the labour force (i.e. the number of unemployed people is divided by the sum of employed and unemployed people).

Methodology

For information on methodology, see Chapter A1. Note that the employment rates do not take into account the number of hours worked.

For further details, refer to the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2017[12]) and the *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Source

For information on sources, see Chapter A1.

Data on subnational regions for selected indicators are available in the *OECD Regional Statistics Database* http://oe.cd/geostats.

Data on proficiency levels and mean scores are based on the Survey of Adult Skills (PIAAC) (2012 and 2023). PIAAC is the OECD Programme for the International Assessment of Adult Competencies.

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Tables and Notes

Chapter A3 Tables

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StatLink https://stat.link/zpit2a

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table A3.1 Employment rates of adults, by educational attainment (2024)

Note: Data refer to ISCED 2011 for all countries except for Argentina and India. Data for Argentina, India, and Indonesia from the International Labour Organization (ILO).

1. Year of reference differs from 2024: 2023 for Argentina, Brazil, Iceland, India and the United States; 2022 for Chile and Indonesia.

2. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (12% of adults aged 25-64 are in this group).

Table A3.2 Trends in employment rates of 25-34 year-olds, by educational attainment and gender (2019 and 2024)

Note: Totals might not add up to 100% for the averages because of missing data for some levels for some countries. Data refer to ISCED 2011 for all countries except for Argentina and India. Data for Argentina, India, and Indonesia from the International Labour Organization (ILO). Columns showing data for category totals are available for consultation on line.

1. Year of reference differs from 2024: 2023 for Argentina, Brazil, Iceland, India and the United States; 2022 for Chile and Indonesia.
2. Year of reference differs from 2019: 2022 for Peru; 2020 for Chile.
3. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (9% of adults aged 25-34 are in this group).

Table A3.3 Employment rates of tertiary-educated adults, by field of study (2024)

Note: Data on humanities (except languages), social sciences, journalism and information might refer to the broad field social sciences, journalism and information only. Data in column 14 might differ from data in Table A3.1 column 9 due to differences in country coverage and reference years.

1. Year of reference differs from 2024: 2021 for Canada, Denmark, Ireland and the United Kingdom; 2022 for Chile.

Table A3.4 Trends in the rates for 25-34 year-olds unemployed or outside the labour force, by educational attainment (2019 and 2024)

Note: Data refer to ISCED 2011 for all countries except for Argentina and India. Data for Argentina, India, and Indonesia from the International Labour Organization (ILO).

1. Year of reference differs from 2024: 2023 for Argentina, Brazil, Iceland, India and the United States; 2022 for Chile and Indonesia.
2. Year of reference differs from 2019: 2022 for Peru, 2020 for Chile.
3. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (9% of adults aged 25-34 are in this group).

Table A3.5 Unemployment rates for adults and distribution of unemployment by duration, by educational attainment (2024)

Note: Data refer to ISCED 2011 for all countries except for Argentina and India. Data for Argentina, India, and Indonesia from the International Labour Organization (ILO). Columns showing data for less than 12 months and showing data for all levels of education are available for consultation on line.

1. Year of reference differs from 2024: 2021 for Argentina, Brazil, Indonesia, Japan and the United States; 2022 for Chile, 2021 for Colombia.
2. Data for upper secondary attainment include completion of a sufficient volume and standard of programmes that would be classified individually as completion of intermediate upper secondary programmes (12% of adults aged 25-64 are in this group).

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table A3.1. Employment rates of adults, by educational attainment (2024)

Percentage of employed 25-64 year-olds among all 25-64 year-olds

	Below upper secondary	Upper secondary or post-secondary non-tertiary			Tertiary					All levels of education
		Upper secondary	Post-secondary non-tertiary	Total	Short-cycle tertiary	Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent	Total	
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	62	80	87	81	86	88	91	99	89	83
Austria	56	78	83	78	86	81	89	91	86	78
Belgium	49	73	86	74	82	86	90	91	88	76
Canada	57	72	82	75	81	84	86[d]	x(7)	83	79
Chile[1]	61	71	a	71	80	88	93	95	86	73
Colombia	64	m	x(4)	70[d]	x(9)	m	x(9)	x(9)	80	71
Costa Rica	63	71	c	71	72	81	86	c	79	69
Czechia	62	86[d]	x(2)	86	92	85	90	93	89	85
Denmark	61	82	91	82	87	87	91	94	88	81
Estonia	69	82	83	82	88	88	90	96	89	84
Finland	52	76	96	77	83	88	91	c	89	79
France	55	75	72	75	86	85	90	93	87	77
Germany	66	82	87	84	90	88	89	93	89	82
Greece	59	69	73	70	57	79	88	91	81	72
Hungary	62	84	92	85	90	90	93	97	92	84
Iceland[1]	77	86	91	86	87	88	94	97	91	86
Ireland	55	75	81	78	83	87	90	93	88	81
Israel	55	74	a	74	85	87	91	88	88	78
Italy	55	74	79	74	75	79	87	94	85	70
Japan	x(2)	82[d]	x(5)	m	84[d]	90[d]	x(6)	x(6)	88	85
Korea	61	72	a	72	79	80	87[d]	x(7)	80	76
Latvia	62	76	77	76	86	87	89	98	88	79
Lithuania	58	74	75	75	a	90	92	96	90	81
Luxembourg	57	73	79	73	80	80	89	88	85	77
Mexico	66	73	a	73	75	81	88	89	81	71
Netherlands	68	84	89	84	90	89	92	94	90	84
New Zealand	71	82	86	83	88	90	90	92	90	84
Norway	63	91	m	91	98	97	m	m	98	90
Poland	49	75	78	76	76	89	92	97	92	81
Portugal	71	86	86	86	88	88	92	94	91	82
Slovak Republic	37	81	84	82	c	83	92	97	91	81
Slovenia	56	79	a	79	m	m	m	m	91	81
Spain	62	74	64	74	82	83	87	91	84	74
Sweden	66	84	83	84	83	90	92	93	89	85
Switzerland	68	84[d]	x(2)	84	m	89	89	93	89	84
Türkiye	52	63	a	63	67	77	85	92	75	61
United Kingdom[2]	63	81	a	78	83	87	89	90	87	80
United States[1]	58	70[d]	x(2)	70	78	83	86	91	83	76
OECD average	60	78	83	78	83	86	90	93	87	79
Partner and/or accession countries										
Argentina[1]	70	77	a	77	x(6)	88[d]	x(6)	m	88	77
Brazil[1]	59	x(6)	x(6)	74	x(6)	85[d]	88	93	86	71
Bulgaria	50	81	88r	81	a	89	92	96	91	80
China	m	m	m	m	m	m	m	m	m	m
Croatia	42	76	a	76	80	85	92	96	89	76
India[1]	67	67	79	68	x(6)	65[d]	x(6)	m	65	67
Indonesia[1]	75	73	a	73	75	82	90	95	81	75
Peru	79	m	a	m	m	81	92[d]	x(7)	82	80
Romania	48	77	86	78	x(6)	91[d]	x(6)	x(6)	91	73
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
South Africa	36	42	38	41	45	39	45[d]	x(7)	40	39
EU25 average	57	78	82	79	83	86	90	94	89	79
G20 average	60	72	75	72	m	80	m	m	81	73

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A3.2. Trends in employment rates of 25-34 year-olds, by educational attainment and gender (2019 and 2024)

Percentage of employed 25-34 year-olds among all 25-34 year-olds

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	Men		Women		Men		Women		Men		Women	
	2019	2024	2019	2024	2019	2024	2019	2024	2019	2024	2019	2024
OECD countries	(1)	(2)	(3)	(4)	(7)	(8)	(9)	(10)	(13)	(14)	(15)	(16)
Australia	74	73	45	54	88	90	70	75	92	94	82	88
Austria	70	64	46	49	90	87	82	83	88	87	84	85
Belgium	62	61	39	42	87	82	72	71	90	89	86	88
Canada	68	63	41	43	83	82	71	70	89	88	84	84
Chile[1, 2]	68	77	44	46	71	79	51	56	83	91	77	81
Colombia	87	83	44	42	85	85	58	56	87	88	74	76
Costa Rica	86	83	42	45	90	85	60	63	88	85	77	74
Czechia	70	78	43	51	95	95	64	63	93	94	67	67
Denmark	64	65	45	48	84	85	72	73	87	90	82	85
Estonia	80	80	44	59	92	89	63	81	96	95	75	84
Finland	59	50	33	30	82	78	71	72	90	90	82	87
France	63	63	37	43	83	83	68	71	89	89	85	86
Germany	70	74	45	50	88	89	80	83	92	92	85	86
Greece	68	68	35	26	71	78	52	53	80	81	68	77
Hungary	75	74	41	45	91	90	70	81	94	93	77	93
Iceland[1]	79	86	79	68	86	87	80	78	89	91	89	88
Ireland	60	48	33	29	85	83	66	71	91	92	84	88
Israel	69	63	41	42	74	70	65	69	89	88	86	84
Italy	66	72	35	36	74	78	54	58	69	75	67	74
Japan	m	m	m	m	m	m	m	m	94[d]	94[d]	82[d]	87[d]
Korea	73	65	52	60	71	73	56	62	81	82	72	77
Latvia	74	69	49	51	85	84	70	70	92	93	87	86
Lithuania	67	69	30	19	84	86	71	67	95	94	90	91
Luxembourg	78	59	75	c	87	83	85	80	92	89	86	86
Mexico	91	90	44	47	90	90	55	58	88	90	75	78
Netherlands	77	77	57	56	89	90	81	82	93	94	90	91
New Zealand	77	75	61	57	90	91	72	70	93	93	85	88
Norway	69	78	55	58	88	m	77	m	89	97	90	m
Poland	61	63	23	38	92	93	60	67	95	95	85	89
Portugal	84	79	71	66	86	88	85	82	85	89	87	89
Slovak Republic	47	51	19	21	92	91	65	75	93	91	70	83
Slovenia	74	71	44	47	91	93	77	78	92	94	87	88
Spain	71	70	52	52	75	77	66	67	81	83	76	81
Sweden	75	73	51	57	86	84	79	76	89	89	86	86
Switzerland	81[b]	79	56[b]	53	88[b]	89	84[b]	84	93[b]	92	87[b]	89
Türkiye	79	82	26	24	82	86	34	37	83	87	62	62
United Kingdom[3]	78	69	54	53	92	88	76	77	93	93	88	88
United States	72	73	39	42	81	80	67	67	89	89	82	84
OECD average	72	71	45	46	85	85	68	70	89	90	81	84
OECD average for countries with available and comparable data for both years	72	71	45	46	85	85	68	70	89	90	81	84
Partner and/or accession countries												
Argentina[1]	81	88	42	52	83	85	60	65	94	95	85	88
Brazil[1]	78	80	44	44	85	87	63	64	90	92	83	85
Bulgaria	64	62	33	31	86	86	72	72	93	92	83	89
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	c	c	c	c	86	86	65	73	80	83	80	87
India[1]	92	95	25	39	86	93	19	28	77	83	29	30
Indonesia[1]	91	90	49	48	91	90	53	48	91	91	77	74
Peru[2]	93	91	66	62	m	m	m	m	89	88	74	73
Romania	77	64	45	26	90	91	71	68	94	94	89	90
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	47	45	31	38	58	51	44	29	73	66	66	12
EU25 average	69	67	43	42	86	86	70	73	89	90	82	85
G20 average	75	75	41	45	82	83	58	60	86	88	75	74

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A3.3. Employment rates of tertiary-educated adults, by field of study (2024)

Percentage of employed 25-64 year-olds among all 25-64 year-olds

		Arts and humanities, social sciences, journalism and information		Business, administration and law		Science, technology, engineering and mathematics (STEM)			Health and welfare		
	Education	Arts	Humanities (except languages), social sciences, journalism and information	Business and administration	Law	Natural sciences, mathematics and statistics	Information and communication technologies (ICT)	Engineering, manufacturing and construction	Health (medical and dental)	Health (nursing and associate health fields)	Total
OECD countries	(1)	(2)	(3)	(5)	(6)	(8)	(9)	(10)	(12)	(13)	(15)
Australia	88	m	86	m	m	86	91	91	m	m	88
Austria	86	85	84	84	86	83	92	88	88	89	86
Belgium	89	m	86	m	m	84	93	93	m	m	89
Canada[1]	81	76	80	81	82	80	84	83	82	81	80
Chile[1]	86	85	83	84	88	84	88	85	m	m	86
Colombia	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	74	58	70	55	55	77	88	83	m	m	79
Czechia	87	90	87	m	89	90	95	93	91	85	88
Denmark[1]	90	77	86	90	92	82	87	90	x	x	88
Estonia	90	90	91	87	85	89	93	90	91	93	89
Finland	89	87	89	89	91	88	90	90	96	92	89
France	89	m	82	m	m	91	87	91	m	m	87
Germany	88	86	85	88	88	86	91	90	89	87	89
Greece	78	m	81	m	m	83	88	88	m	m	82
Hungary	90r	c	70	86	c	c	c	74r	m	c	76
Iceland	m	m	m	m	m	m	m	m	m	m	m
Ireland[1]	86	x(4)	86	x(7)	x(7)	87	89	95	x(14)	x(14)	87
Israel	m	m	m	m	m	m	m	m	m	m	m
Italy	84	75	83	85	86	83	86	88	m	m	85
Japan	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m
Latvia	86	81	86	88	89	89	87	89	94	81	88
Lithuania	89	84	93	90	94	91	93	88	95	93	90
Luxembourg	93	m	85	m	m	80	87	80	m	m	86
Mexico	80	81	79	81	82	78	86	85	83	79	81
Netherlands	90	90	90	92	90	89	92	92	91	91	91
New Zealand	m	m	m	m	m	m	m	m	m	m	m
Norway	90	87	85	90	m	86	92	92	m	m	89
Poland	87	91	91	92	92	91	95	94	m	m	92
Portugal	92	m	91	m	m	86	91	92	m	m	91
Slovak Republic	91	m	90	m	m	87	95	91	m	m	91
Slovenia	88	88	89	91	91	93	93	94	m	m	91
Spain	82	m	83	m	m	85	87	87	m	m	84
Sweden	91	84	89	89	86	85	93	92	90	93	90
Switzerland	90	87	87	88	88	88	91	93	90	90	89
Türkiye	m	m	m	m	m	m	m	m	m	m	m
United Kingdom[1]	83	m	85	m	m	83	85	87	m	m	85
United States	m	m	m	m	m	m	m	m	m	m	m
OECD average	87	m	85	m	m	86	90	89	m	m	87
Partner and/or accession countries											
Argentina	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m
Croatia	91	m	84	m	m	86	94	92	m	m	90
India	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m
Peru	83	m	81	m	m	80	84	88	m	m	82
Romania	96	m	91	m	m	92	96	90	m	m	91
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m
EU25 average	88	m	86	m	m	87	91	90	m	m	88
G20 average	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A3.4. Trends in the rates for 25-34 year-olds unemployed or outside the labour force, by educational attainment (2019 and 2024)

Rates for those outside the labour force are measured as a percentage of all 25-34 year-olds; unemployment rates as a percentage of 25-34 year-olds in the labour force

	Unemployment						Outside the labour foce					
	Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary		Below upper secondary		Upper secondary or post-secondary non-tertiary		Tertiary	
	2019	2024	2019	2024	2019	2024	2019	2024	2019	2024	2019	2024
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	10	7	5	4	3	2	32	29	15	13	11	8
Austria	15	18	4	5	4	5	31	29	10	10	11	10
Belgium	17	17	6	9	4	4	38	36	14	15	9	7
Canada	12	15	7	8	5	6	35	35	15	15	10	9
Chile[1, 2]	17	12	15	11	10	6	33	28	29	24	12	8
Colombia	10	10	12	12	12	11	24	27	18	20	9	9
Costa Rica	14	9	12	8	9	8	22	27	16	20	10	14
Czechia	13	10	2	3	1	2	34	27	16	16	21	20
Denmark	10	12	6	6	7	7	37	34	16	14	9	6
Estonia	7	11	5	8	3	6	26	19	14	7	14	6
Finland	17	23	7	10	5	6	41	46	17	17	11	6
France	24	18	11	10	6	6	33	34	15	15	8	6
Germany	12	9	3	3	3	3	33	30	13	11	9	8
Greece	30	24	26	16	19	12	23	34	16	19	10	10
Hungary	11	15	3	4	2	2	34	28	16	10	14	5
Iceland[1]	6	6	5	4	4	2	16	15	12	12	7	8
Ireland	13	15	6	7	4	4	44	54	19	17	9	6
Israel	4	5	5	4	4	3	40	42	26	27	9	12
Italy	21	15	14	9	12	7	33	32	25	24	23	20
Japan	m	m	m	m	3[d]	3[d]	m	m	m	m	10[d]	7[d]
Korea	6	5	7	4	6	4	34	34	29	27	19	17
Latvia	14	14	7	10	4	5	24	27	14	13	7	7
Lithuania	19	15	8	10	3	4	33	38	14	12	4	4
Luxembourg	c	c	c	c	4	5	c	c	8	12	7	8
Mexico	3	3	4	4	6	4	31	31	25	24	14	13
Netherlands	7	6	4	3	3	3	27	27	11	10	6	5
New Zealand	7	8	4	5	2	3	26	27	15	14	9	7
Norway	8	7	3	7	3	3	31	26	13	11	8	7
Poland	13	9	4	4	3	2	46	40	18	14	9	6
Portugal	8	11	6	7	7	6	14	16	9	8	7	6
Slovak Republic	37	40	6	6	3	3	47	37	14	10	18	12
Slovenia	13	11	6	5	5	4	29	30	9	8	6	7
Spain	23	21	17	14	12	9	17	21	15	16	11	10
Sweden	17	19	5	7	4	5	22	17	13	13	9	8
Switzerland	10	11	5	5	4	4	23	24	9	9	6	6
Türkiye	16	11	15	10	15	11	38	41	28	27	15	18
United Kingdom[3]	7	9	3	4	2	3	28	32	13	14	7	7
United States[1]	10	9	6	6	2	3	37	34	21	21	13	11
OECD average	13	13	7	7	6	5	31	31	16	15	11	9
OECD average for countries with available and comparable data for both years	13	13	7	7	6	5	31	31	16	15	11	9
Partner and/or accession countries												
Argentina[1]	14	8	11	7	5	4	26	21	20	19	6	6
Brazil[1]	15	10	13	8	8	5	26	29	16	18	7	8
Bulgaria	17	18	5	5	3	2	41	42	16	15	11	8
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	c	c	9	7	11	6	42	43	15	13	10	9
India[1]	4	2	9	5	17	14	42	34	38	33	34	32
Indonesia[1]	3	3	4	4	5	5	28	29	23	26	13	15
Peru[2]	4	5	m	m	6	7	17	19	m	m	13	14
Romania	9	18	4	5	2	2	33	45	15	16	7	6
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	43	39	33	43	21	56	31	33	24	30	12	19
EU25 average	16	16	7	7	5	5	33	33	14	13	10	8
G20 average	13	11	10	9	7	8	32	32	21	21	13	13

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A3.5. Unemployment rates for adults and distribution of unemployment by duration, by educational attainment (2024)

Percentage of unemployed 25-64 year-olds among 25-64 year-olds in the labour force

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
		Distribution of unemployment by its duration				Distribution of unemployment by its duration				Distribution of unemployment by its duration		
	Unemployment rate	Less than 3 months	3 months to less than 12 months	12 months or more	Unemployment rate	Less than 3 months	3 months to less than 12 months	12 months or more	Unemployment rate	Less than 3 months	3 months to less than 12 months	12 months or more
OECD countries	(1)	(2)	(4)	(5)	(6)	(7)	(9)	(10)	(11)	(12)	(14)	(15)
Australia	2.3	m	m	39	2.1	m	m	27	1.3	m	m	15
Austria	11.1	30	37	34	4.2	41	36	23	3.4	39	40	20
Belgium	10.4	17	22	61	5.5	30	31	39	2.9	34	36	30
Canada	9.7	58	34	8	6.1	53	35	12	4.7	53	37	10
Chile[1]	8.4	88	12	1	8.1	84	15	1	5.5	76	22	2
Colombia[1]	10.3	m	m	15	14.0	m	m	19	11.6	m	m	25
Costa Rica	5.9	80	15	6	6.1	61	26	13	5.4	59	21	20
Czechia	10.3	15	31	53	2.1	29	43	29	1.3	40	41	20
Denmark	6.8	34	42	25	4.3	45	38	17	4.6	36	43	21
Estonia	11.5	36	42	22	7.8	34	38	29	4.9	32	39	29
Finland	16.6	m	m	30	8.2	m	m	26	4.3	m	m	27
France	11.0	30	34	36	6.6	38	33	29	4.4	41	36	23
Germany	6.3	26	35	39	2.6	31	35	35	2.5	37	40	24
Greece	11.7	17	27	56	11.0	14	29	58	6.9	14	29	56
Hungary	12.1	31	26	43	3.6	35	28	37	1.7	42	28	29
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	5.6	19	31	50	3.9	29	35	36	2.9	43	34	22
Israel	3.0	10	30	60	3.2	11	39	50	2.5	10	39	51
Italy	9.1	19	24	57	5.3	21	26	53	3.2	27	31	41
Japan[1]	m	m	m	m	m	m	m	m	2.0	m	m	m
Korea	3.1	m	m	m	2.7	m	m	m	2.4	m	m	m
Latvia	14.0	22	33	45	8.0	27	38	36	3.9	33	40	28
Lithuania	13.9	17	33	50	9.1	22	41	37	4.1	27	46	26
Luxembourg	7.0	c	c	c	5.4	c	c	c	4.6	c	48	29
Mexico	1.7	87	11	2	2.5	79	17	3	2.9	74	23	3
Netherlands	3.2	41	32	27	2.4	49	31	21	2.4	53	31	16
New Zealand	5.1	37	m	17	3.5	45	m	14	2.3	53	m	9
Norway	m	57	29	14	m	67	33	m	m	62	23	15
Poland	8.1	c	34	45	3.0	27	41	32	1.3	39	42	19
Portugal	6.7	m	m	50	5.7	m	m	41	4.0	m	m	32
Slovak Republic	36.3	3	13	85	4.0	8	29	63	1.9	18	33	49
Slovenia	5.6	17	37	46	3.5	23	35	43	1.9	28	36	36
Spain	15.6	30	30	41	10.6	34	29	37	6.3	37	32	31
Sweden	17.5	21	41	38	4.8	31	40	29	4.6	33	40	26
Switzerland	8.0	m	m	45	3.3	m	m	38	3.5	m	m	34
Türkiye	7.3	46	36	19	8.1	40	36	24	7.5	34	39	27
United Kingdom[2]	4.7	27	36	38	2.8	40	33	27	2.3	48	35	17
United States[1]	9.9	36	39	25	7.3	37	41	22	4.0	31	42	27
OECD average	9.4	34	30	36	5.5	37	33	30	3.8	40	35	25
Partner and/or accession countries												
Argentina[1]	8.6	m	m	40	7.8	m	m	46	3.1	m	m	43
Brazil[1]	12.5	27	33	40	12.4	21	32	47	6.7	16	36	48
Bulgaria	14.3	23	22	56	3.7	24	24	52	1.6	18	30	52
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	9.4	c	c	c	4.4	18	42	40	2.9	22	45	33
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia[1]	1.6	38	37	25	3.2	24	38	37	3.0	21	34	45
Peru	4.0	100	m	m	m	m	m	m	5.4	100	m	m
Romania	12.0	16	43	41	3.0	16	47	37	1.4	23	38	39
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	46.1	m	m	70	45.5	m	m	72	53.2	m	m	66
EU25 average	9.6	34	30	36	5.5	37	33	31	3.8	40	35	25
G20 average	10.2	35	30	39	5.8	34	34	34	3.8	39	36	28

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Chapter A4. What are the earnings advantages to education?

Highlights

- On average across OECD countries, adults with a short-cycle tertiary degree earn 17% more than those with upper secondary attainment. This earnings advantage rises to 39% for those with a bachelor's degree and 83% for those with a master's or doctoral degree.
- For all countries with available data, the private net financial returns for a man or a woman obtaining a bachelor's, master's, doctoral or equivalent degree are greater than from obtaining a short-cycle tertiary degree. On average, the highest private returns for a man and a woman attaining a bachelor's, master's or doctoral tertiary qualification are observed in Chile.
- On average, among adults with upper secondary or post-secondary non-tertiary attainment, those scoring at or above Level 4 (where 5 is the highest) in numeracy proficiency in the Survey of Adult Skills (PIAAC) – meaning that they can complete tasks requiring advanced mathematical concepts – earn 31% more than those scoring at Level 2 (who are only able to apply basic mathematical concepts). This skills premium rises to 40% among tertiary-educated adults.

Context

Higher levels of education are strongly associated with better employment opportunities (see Chapter A3) and higher earnings. The expectation of greater financial returns – alongside broader social benefits – motivates individuals to invest in education and training throughout their lives.

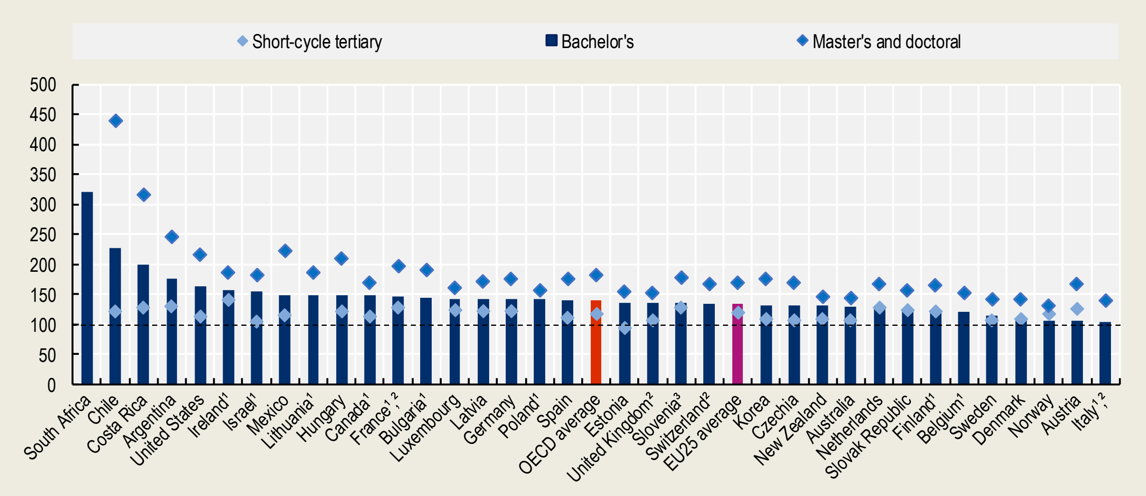
However, the earnings advantage of higher educational attainment is not uniform. For each country, it varies by age, gender, programme type and field of study. Labour-market participation also plays a key role: individuals working part time generally earn less, both in total and per hour, than their full-time counterparts. Likewise, those with more work experience tend to earn more. Despite gains in education, gender pay gaps persist across all levels of attainment and programme types.

Today, more young adults than ever before hold tertiary qualifications (see Chapter A1), and the expansion of tertiary education continues. Although the labour markets in most countries have absorbed this growing supply of highly educated workers, large differences in earnings remain, depending on the field of study. These differences may reflect varying levels of demand for specific skills across sectors, as well as structural and cultural factors. As economies evolve, education systems must ensure that graduates are equipped with knowledge and competencies aligned with both labour-market needs and broader societal goals.

Earnings disparities are also shaped by broader economic and institutional factors. In some countries with a smaller share of tertiary-educated adults, high earnings are more concentrated among this group, contributing to wider income inequality and raising concerns about social mobility. Wage outcomes are also influenced by the interplay of supply and demand for skills, minimum wage policies, labour-market regulation and institutional characteristics such as the presence of trade unions, collective bargaining arrangements and the overall quality of working conditions.

Figure A4.1. Relative earnings of tertiary-educated workers, by level of educational attainment (2023)

25-64 year-old full-time full-year workers, upper secondary education = 100



1. Year of reference differs from 2023.
2. Index 100 refers to the combined levels of upper secondary or post-secondary non-tertiary education
3. Includes part-time and part-year workers.

For data, see Table A4.1. For a link to download the data, see Tables and Notes section.

Other findings

- The returns for a man attaining a short-cycle tertiary qualification are highest in Austria and the Netherlands while for a woman they are highest in France and Luxembourg (over USD 250 000).
- A few countries have a small share of tertiary-educated adults who enjoy high relative earnings on average while in others tertiary attainment is more widespread and the differences in relative earnings are smaller. A third group of countries have both a small share of tertiary-educated adults and a low earnings premium, highlighting that there is room to improve the attractiveness of tertiary education.
- On average, women earn less than men and this is true for any educational attainment level and field of study. Tertiary-educated women who studied business, administration and law earn between 10% and 33% less than their male peers, depending on the country. The gender gap across countries can reach between less than 1% and to 38% among those who studied science, technology, engineering and mathematics (STEM) fields, and between 9% and 43% for health and welfare.

Note

The analysis presents three types of relative earnings: 1) using the earnings of workers with upper secondary education as the baseline; 2) using male workers' earnings as the baseline; and 3) using earnings of tertiary-educated workers from all fields of study as the baseline. In all cases, given the focus on relative earnings, any increase or decrease in the results could reflect a change in the interest group (numerator) or in the baseline group (denominator). Readers are advised to consider actual earnings in Tables A.A4.4 and A.A4.5 from *Education at a Glance 2025 Sources, Methodologies and Technical Notes* when interpreting relative earnings (https://doi.org/10.1787/fcfaf2d1-en).

Due to the difference in survey methods used to gather data from countries, the analysis of relative earnings is based on full-time full-year workers to ensure better comparability across countries. Refer to *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en) for more information on the survey methods. Data on relative earnings for all workers (full- and part-time) are available for consultation on line (http://data-explorer.oecd.org/s/4s).

Analysis

Earnings relative to those of workers with upper secondary attainment

Higher levels of educational attainment in general lead to higher earnings. The foundational skills, knowledge and competencies provided by upper secondary education are essential in the labour market and ensure that individuals have achieved a minimum level of literacy and numeracy, which are fundamental for most jobs. Without these basic skills, individuals are often limited to low-paying jobs, although vocational education and training pathways can also lead to stronger labour market outcomes, particularly when they are well aligned with employer needs and provide access to quality jobs.

Tertiary education is key to achieving upward economic and social mobility, enabling individuals to improve their socio-economic status through higher earnings. The in-depth knowledge and specialised skills provided by tertiary programmes make individuals more competitive in the job market. A tertiary degree also opens up a wider range of job opportunities, including those in professional and managerial roles, which typically offer higher salaries. Universities and colleges also provide opportunities for students to network with their peers, professors and industry professionals, which can lead to better job prospects and higher earnings.

The average earnings of tertiary-educated full-time full-year workers are substantially higher than those of workers with only upper secondary attainment. This earnings premium for completing a tertiary degree is 54% on average across OECD countries but individual countries have larger differences. The earnings advantage for tertiary-educated workers is 25% or less in Denmark, Norway and Sweden, but over 100% in Chile and Colombia among OECD countries and over 140% in Brazil and South Africa (Table A4.1).

Among tertiary-educated workers, the earnings advantage tends to increase with the level of attainment. In most OECD and partner countries, full-time full-year workers with a master's or doctoral or equivalent degree earn more than those with a bachelor's degree, who in turn earn more than those with a short-cycle tertiary degree. On average across OECD countries, adults with a short-cycle tertiary degree earn 17% more than those with upper secondary attainment, rising to 39% more for those with a bachelor's degree and 83% more for those with a master's or doctoral or equivalent degree. Among OECD countries, the greatest earnings advantage over upper secondary attainment for adults with a long tertiary degree is in Chile (128% more than the earnings of adults with upper secondary attainment for a bachelor's degree and 340% more for a master's or doctoral degree) while for a short-cycle tertiary qualification the greatest advantage is in Ireland (41% more) (Figure A4.1). The largest earnings premium among partner countries is observed at bachelor's level in South Africa.

Earnings advantages by educational attainment tend to increase among older workers. On average across OECD countries, tertiary-educated 25-34 year-olds earn 39% more than their peers with upper secondary attainment while 45-54 year-olds earn 67% more. Within the levels of tertiary attainment, the earnings advantage of a short-cycle tertiary qualification is 10% among 25-34 year-olds, compared to 20% for 45-54 year-olds on average across OECD countries. For master's or higher attainment, the advantage is 53% for the younger age group and 96% more for the older one (Table A4.1.).

Investing in education has a significant impact on earning potential and employment outcomes (see Chapter A3), particularly when considering the type and level of tertiary qualifications attained. As more individuals pursue higher education, understanding the economic returns of different tertiary pathways becomes increasingly important.

Box A4.1 examines the financial implications of pursuing various levels of tertiary education and highlights how these choices shape individuals' economic trajectories.

Box A4.1. Financial returns to education

Investing time and money in education is an investment in human capital. Better employment prospects (see Chapter A3) and higher earnings are strong incentives for adults to pursue education and postpone employment. Returns to education, however, are not limited to academic tertiary degrees. Vocational and professional programmes at the upper secondary or post-secondary level can also provide strong financial incentives, especially when aligned with labour-market needs and offering pathways to further learning or specialisation (OECD, 2020[1]).

This box provides information on the incentives for an individual to invest in education by considering three measures: private net financial returns, internal rates of return and the benefit-cost ratio. It examines the financial consequences for individuals from investing in tertiary education rather than entering the labour market with an upper secondary qualification. Specifically, the benefits to tertiary education are the difference in tertiary-educated workers' estimated lifetime earnings from employment after paying income taxes and social contributions compared to those of individuals who enter the labour force at the typical age for completing upper secondary education. While this analysis focuses on returns to tertiary education, it does not capture the potentially high returns from other forms of human capital investment, such as professional certifications or advanced vocational programmes. This analysis also accounts for the costs of tertiary education as well as the forgone earnings while completing tertiary education (see *Definitions* section). It estimates the financial returns on investment in education only up to a theoretical retirement age of 64 and therefore does not take pensions into account (OECD, 2021[2]). Nor does it take into account either student loans or part-time or part-year employment. In order to account for the fact that money earned tomorrow is worth less than money today, this analysis computes the net present value (NPV) of estimated future financial flows. In the results presented below, future financial flows are discounted at 2%.

On average across the OECD, the private net financial returns to tertiary education from a full-time full-year job are USD 364 200 for a man and USD 300 900 for a woman. The private net financial returns to tertiary education are higher for men than for women in most OECD countries with available data (Table A4.5, available on line). Despite these lower returns, young women are more likely than young men to complete tertiary education (see Chapter A1). This is partially related to the fact that the differences in earnings and employment between upper secondary and tertiary educational attainment are higher for women than they are for men.

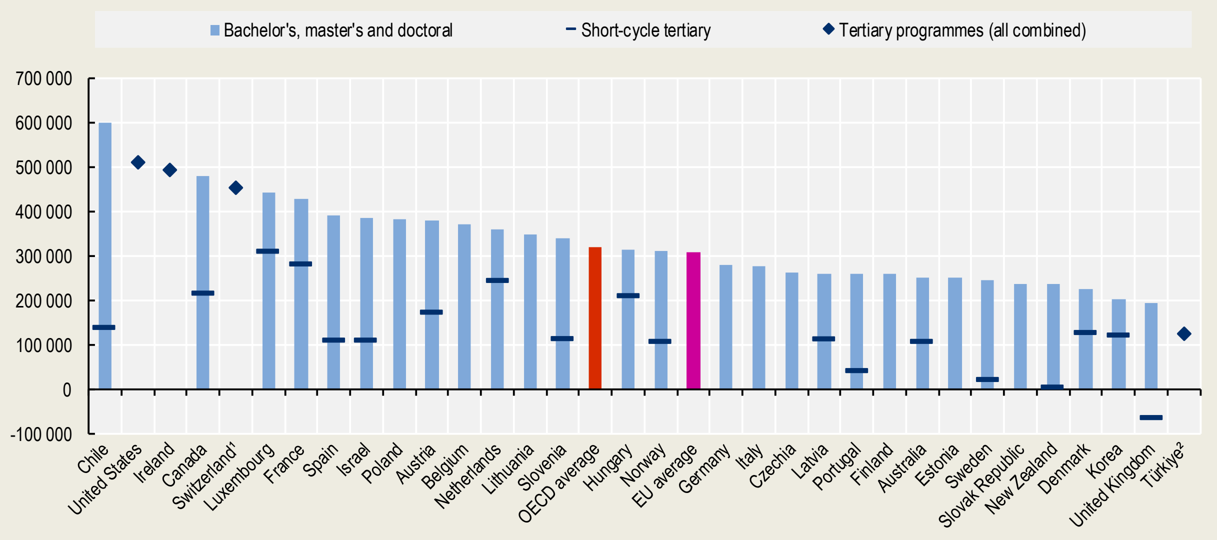
The highest returns for both men and women for all levels of tertiary attainment combined are in the United States, although Chile has the highest benefit-cost ratio and internal rate of return (i.e. the discount rate that would equalise the NPV of benefits and costs) (Table A4.5, available on line).

The returns for tertiary education can be broken down into short-cycle tertiary attainment, and bachelor's, master's and doctoral or equivalent level. The composition of the population with qualifications at each tertiary level differs between countries (see Chapter A1), and the mix of qualifications can have a significant effect on the financial returns to education for tertiary education overall. For nearly all countries with available data, the private net financial returns from obtaining a bachelor's, master's, doctoral or equivalent degree are greater than from obtaining a short-cycle tertiary degree. Although the total costs of a higher degree tend to be larger than for a short-cycle tertiary qualification, the total benefits accrued during individuals' working lives compensate for the higher initial costs (Figure A4.2 and Table A4.5, available on line).

The returns for a man attaining a short-cycle tertiary qualification are highest in Austria and the Netherlands while for a woman they are highest in France and Luxembourg (over USD 250 000). Sometimes the earnings, employment and cost data breakdowns by level of tertiary education are misaligned and the different data sources may suffer from small sample sizes, especially for short-cycle tertiary attainment. This may explain the negative average figures in some countries, for example for men in Sweden and for women in the United Kingdom. The average returns of attaining a long tertiary qualification (bachelor's, master's or doctoral) are USD 394 000 for a man and USD 320 500 for a woman, with the highest returns observed in Chile for both genders (Figure A4.2 and Table A4.5, available on line).

Figure A4.2. Private financial returns for a woman attaining a short-cycle tertiary degree or a bachelor's or higher degree (2022)

As compared with returns to a woman attaining upper secondary education; in equivalent USD converted using PPPs for GDP; future costs and benefits are discounted at a rate of 2%



1. Year of reference differs from 2022. Refer to the OECD Data Explorer (http://data-explorer.oecd.org/s/4s) for more details.
2. Only net earnings are available, therefore calculations use these values as if they were gross earnings.
For data, see Table A4.5. For a link to download the data, see Tables and Notes section.

Calculating the financial returns of education means choosing a specific discount rate to estimate the current worth of future financial flows. The choice of discount rate is challenging, and it makes a considerable difference when analysing the returns to long-term investments, as is the case with investment in education. Table A4.6, available on line, shows how the private financial returns for men and women attaining tertiary education change when three different discount rates are used. Changing from a discount rate of 2% (assumed in the analysis above) to a rate of 3.75% reduces the NPV for men by at least 33% in all countries with available data. If a discount rate of 8% is used, the NPV falls by over 72% in all countries. These comparisons highlight the sensitivity of the NPV results to changes in the discount rate.

Distribution of earnings among workers by educational attainment

Relative earnings by educational attainment level are not only a measure of how much the labour market rewards further education, but also reflect broader patterns of income distribution and social inequality (OECD, 2024[3]). Higher relative earnings for tertiary-educated adults indicate strong individual incentives to pursue education, but they can also signal wider income inequalities, or wage dispersion – particularly when wages at the lower end of the attainment scale remain stagnant. Although education can be a powerful equaliser, unequal access and outcomes may reinforce existing socio-economic disparities (UNESCO, 2020[4]).

This trade-off is evident in countries where high earnings premiums coexist with greater income inequality. For example, Chile, Colombia and Costa Rica are among the OECD countries with the highest earnings premiums for tertiary-educated adults, as well as the highest levels of wage dispersion. Conversely, in countries with more compressed wage structures, such as the Nordic countries, the earnings advantage of tertiary education is smaller, but overall income inequality is also lower (Table A4.1).

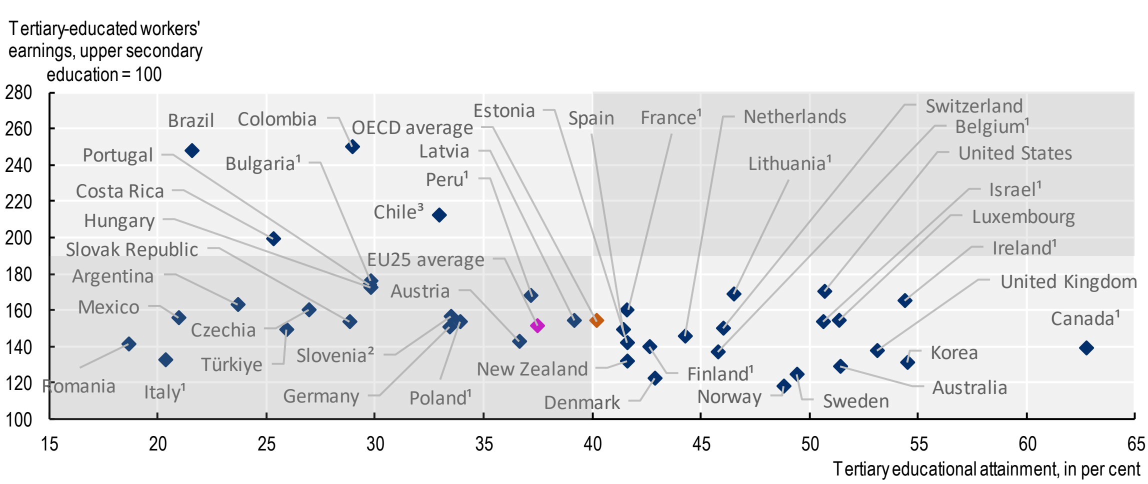
A key indicator of education-related labour-market inequality is the proportion of individuals at each attainment level who earn significantly more or less than the median. On average across OECD countries, 28% of workers with below upper secondary attainment earn at or below half the median wage, compared to 17% of those with upper secondary or post-secondary non-tertiary education and just 10% of tertiary-educated workers. Conversely, only 26% of workers with below upper secondary attainment earn more than the median, compared to 42% of those with upper secondary or post-secondary non-tertiary attainment and 68% of tertiary-educated workers (Table A4.2).

These disparities are even more pronounced at the top of the earnings distribution. On average across OECD countries, just 3% of workers with below upper secondary attainment earn more than twice the median wage, compared to 6% of those with upper secondary or post-secondary non-tertiary attainment and 22% of tertiary-educated workers. Among OECD and partner countries, more than 40% of tertiary-educated 25-64 year-olds earn more than twice the median in Brazil, Chile, Colombia, Costa Rica and South Africa (Table A4.2).

Figure A4.3 compares relative earnings for tertiary graduates with tertiary attainment rates. In Brazil, Colombia and Costa Rica, where less than 30% of adults hold a tertiary qualification, they enjoy high relative earnings. In these countries, investing in education yields strong labour-market returns, with an earnings premium over upper secondary attainment of 99% or more. At the other end of the spectrum are countries where tertiary attainment is more widespread and the wage dispersion is lower, resulting in smaller relative earnings differences. This is the case in Australia, Canada, Korea and the United Kingdom, where more than half of adults hold a tertiary qualification, but the earnings premium is below 40% – and similarly only a small share earn over twice the median (Table A4.2). In these countries, tertiary education has become the norm and is associated with a more equitable income distribution. In contrast, in countries such as Italy and Romania, less than one-quarter of adults have completed tertiary education yet the earnings premium is no more than 41%. These countries need to make efforts to strengthen the value of tertiary qualifications in the labour market and ensure that economic conditions encourage individuals to attain a tertiary education.

Figure A4.3. Adults' tertiary educational attainment and relative earnings (2023)

25-64 year-old adults and full-time full-year workers



1. Year of reference differs from 2023.
2. Includes part-time and part-year workers.
3. Year of reference for educational attainment: 2022.
For data, see Table A4.1 and OECD Data Explorer: https://data-explorer.oecd.org/. For a link to download the data, see Tables and Notes section.

Gender disparities in earnings

Although increasing educational attainment narrows gender differences in employment rates (see Chapter A3), the gender gap in earnings does not vary much across educational attainment levels. On average across OECD countries, tertiary-educated women working full time and for the full year earn 23% less than their male peers, while those with upper secondary or post-secondary non-tertiary attainment earn 20% less and those with below upper secondary attainment earn 21% less (Table A4.3). As women are more likely to work part time or only for part of the year than men, the gender differences in earnings are wider among all workers than among full-time full-year workers (OECD, 2025[5]).

For all education levels, the gender gap in earnings widens with age up until age 54. Among full-time full-year 25-34 year-old workers, young women earn between 17% and 18% less than their male peers, depending on the level of educational attainment, while 45-54 year-old women earn between 20% and 24% less. On average, the gender gap is between 2 and 7 percentage points wider for 45-54 year-old women than for 25-34 year-old ones. However, differences across educational attainment levels vary by country and are relatively small on average (Table A4.3).

There is no single explanation for why the gender pay gap persists despite women outpacing men in educational attainment (see Chapter A1). It reflects various complex factors including occupational segregation, biased hiring practices and unequal opportunities for career advancement (World Economic Forum, 2024[6]). Women are less likely than men to be promoted or to get substantial wage increases when they change employers. Moreover, career breaks for women around the age of childbirth remain an important contributor to wage differences between men and women in many OECD countries (OECD, 2022[7]) (Rabaté et al., 2021[8]). Women are more likely to seek less competitive paths and greater flexibility at work in order to deal with their family commitments. This leads to lower earnings than men with the same educational attainment. As a result, although there have been improvements in gender pay equality, significant disparities still exist globally, with women often earning less than men for similar work due to ongoing discrimination and structural biases (ILO, 2022[9]).

Differences in earnings by field of study

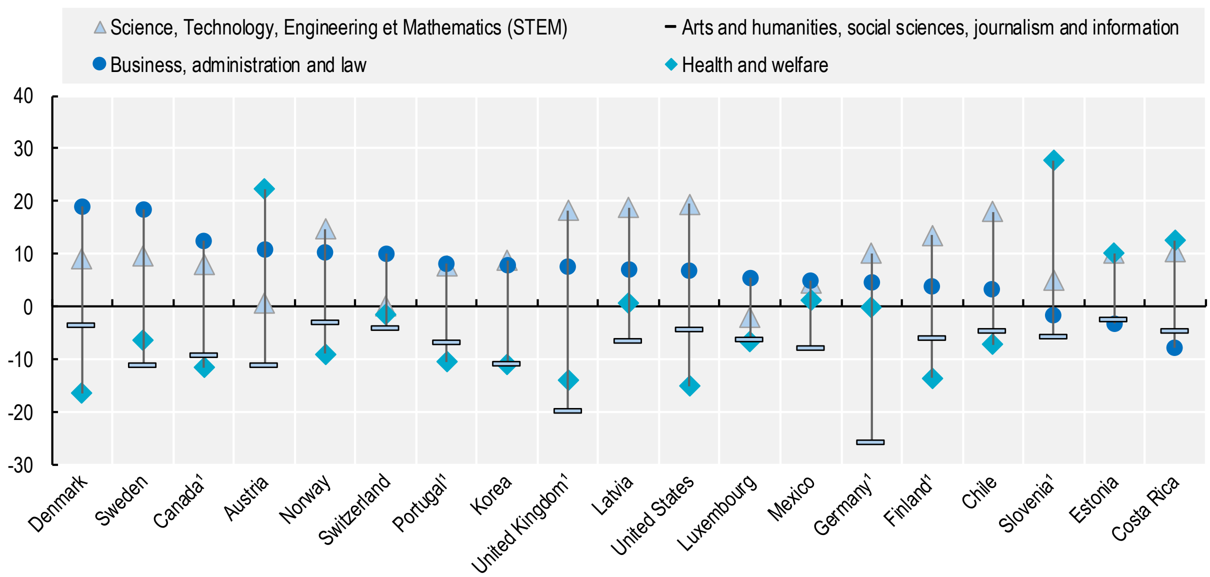
A tertiary degree yields better earnings, but as Figure A4.4 shows, there are substantial differences depending on the field of study. Among the OECD countries with available data, STEM fields are most commonly associated with the highest earnings. In the United States, having a tertiary qualification in a STEM field can be associated with earnings that are up to 20% higher than the average. In other countries, different broad fields attract the highest relative earnings. Denmark and Sweden have the highest earnings premium for business, administration and law compared to other fields (19% more) while Slovenia is the country where health and welfare offers the greatest relative increase (28% more). The lowest earnings tend to be associated with qualifications in the fields of arts and humanities and of education (Table A4.4.).

Figures on relative earnings by field of study provide important insights into the labour-market outcomes of graduates, but they should be interpreted with caution. One key limitation is that these figures do not necessarily reflect earnings within the same field of work. Although graduates from STEM fields are more likely to work in STEM-related occupations, this is less true for other disciplines. For example, education-related jobs are often filled by individuals with degrees in a wide range of subjects – including humanities, social sciences and languages – especially teachers in primary and lower secondary (OECD, 2022[10]).

The high relative earnings associated with some fields of study may relate to a potential mismatch between the supply of current graduates and labour-market needs. With rapid digitalisation, the relatively high earnings associated with an information and communication technologies (ICT) degree may reflect the imbalance between strong labour-market demand for ICT workers and the very small share of graduates who studied this field (see Chapter A1). However, labour-market demand could be met by exploring other skills that may substitute for the lack of an ICT degree. For example, using job posting data, a recent study suggests that tertiary-educated workers who had studied engineering or business management have technical skills that are suitable for filling vacancies in some ICT occupations (Brüning and Mangeol, 2020[11]).

Figure A4.4. Relative earnings of tertiary-educated adults, by field of study (2023)

25-64 year-old full-time full-year workers, percentage difference from average earnings (all fields)



1. Year of reference differs from 2023.
For data, see Table A4.4. For a link to download the data, see Tables and Notes section.

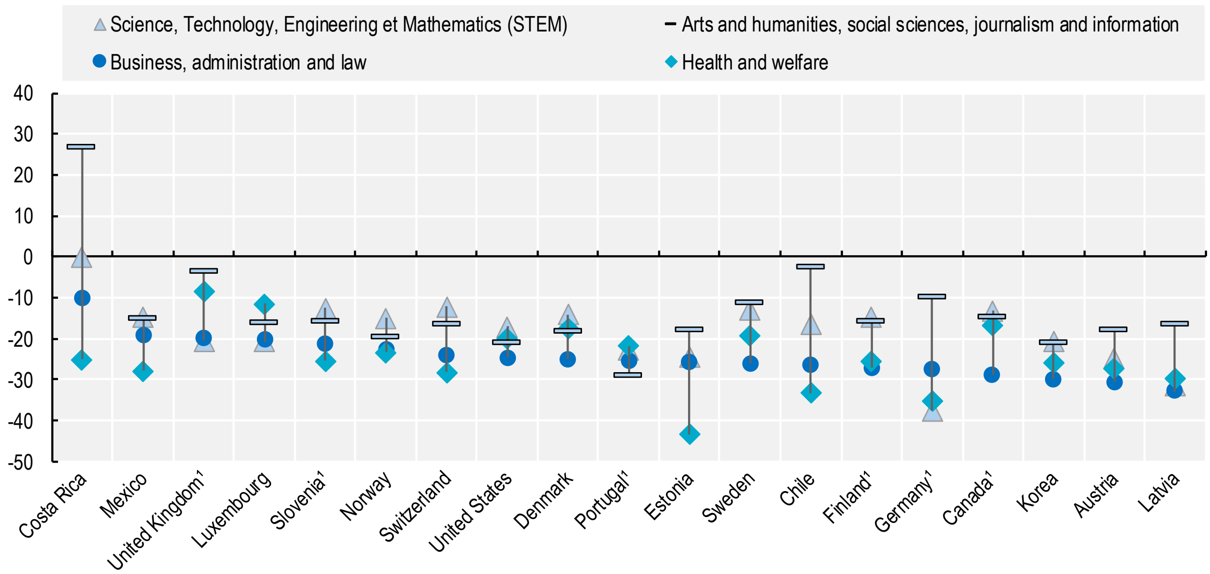
Disaggregating earnings advantages by narrower fields of study helps to highlight the differences that may exist within a broader field. In the OECD countries with available data, the differences in earnings across the individual STEM fields are quite small except in Estonia and Latvia, where they are primarily driven by higher employment rates for those with a degree in information and communication technologies (ICT). However, there are wide differences within the broad field of health and welfare. Although average relative earnings overall are often modest, this masks significant variation between the subfields of medical and dental, and nursing and associate health fields (Table A4.4).

Moreover, relative earnings by field of study are closely intertwined with gender patterns in higher education and the labour market. Medical degrees typically lead to high-earning careers as medical doctors, while nursing degrees, more commonly pursued by women, often lead to lower-paid positions ((OECD, 2021[2]); (OECD, 2023[12])). In countries with strong occupational segregation, such differences may amplify gender wage gaps and influence perceptions of the value of certain fields.

Across OECD countries with available data, tertiary-educated women who studied business, administration and law earn between 10% (Costa Rica) and 33% (Latvia) less than their male peers (Figure A4.5). The gender gap ranges between less than 1% (Costa Rica) to 38% (Germany) for those with a STEM background and between 9% (the United Kingdom) and 43% (Estonia) for those who studied health and welfare. Women who studied arts, humanities, social sciences, journalism and information earn less than their male peers (up to 29% less in Portugal) in all OECD countries with the exception of Costa Rica, where they earn 27% more).

Figure A4.5. Tertiary-educated women's relative earnings, by field of study (2023)

25-64 year-old full-time full-year workers; percentage difference between women's and men's earnings



1. Year of reference differs from 2023.
For a link to download the data, see Tables and Notes section.

Differences in relative earnings by level of educational attainment or field of study are metrics based on that both attainment and fields of study are proxies for skill levels and, in this case, for how well people with different skills do on the labour market. The newly-published data from the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC) (OECD, 2024[13]) sheds light on earnings differences by skill levels (Box A4.2).

Box A4.2. Earnings by numeracy proficiency levels

Skills enable adults to perform tasks more efficiently, contributing to higher productivity and, in turn, higher wages. The link between skills and earnings is well established in economic theory and supported by empirical evidence. According to standard microeconomic theory, wages reflect workers' productivity; individuals with higher skills are therefore expected to earn more. The first cycle of the Survey of Adult Skills (administered in 2012-17) confirmed this relationship, showing that proficiency in literacy and numeracy is positively associated with wages, even after accounting for formal educational attainment.

Although education and skills are correlated – education develops skills and individuals with greater skills tend to pursue more education – attainment in formal education fails to capture differences in programme quality and individual skill differences within levels. Moreover, returns to education may reflect not only skills but also other factors such as signalling, screening or access to restricted opportunities (OECD, 2024[13]).

Further analysis of PIAAC data has shown that while the earnings premium associated with formal education tends to decline with educational expansion, the association between skills and wages remains robust (Araki, 2020[14]). Skills also become more important later in life, as employers shift from relying on educational credentials to observing actual performance – a process known as employer learning (Hanushek et al., 2015[15]).

Findings from the 2023 Survey of Adult Skills suggests that the effects of educational attainment are greater than those of information-processing skills, although both remain positively associated with wages. This may be because formal qualifications reflect not just cognitive skills but also a broader set of competencies, including social and emotional attributes like perseverance and conscientiousness (OECD, 2024[13]).

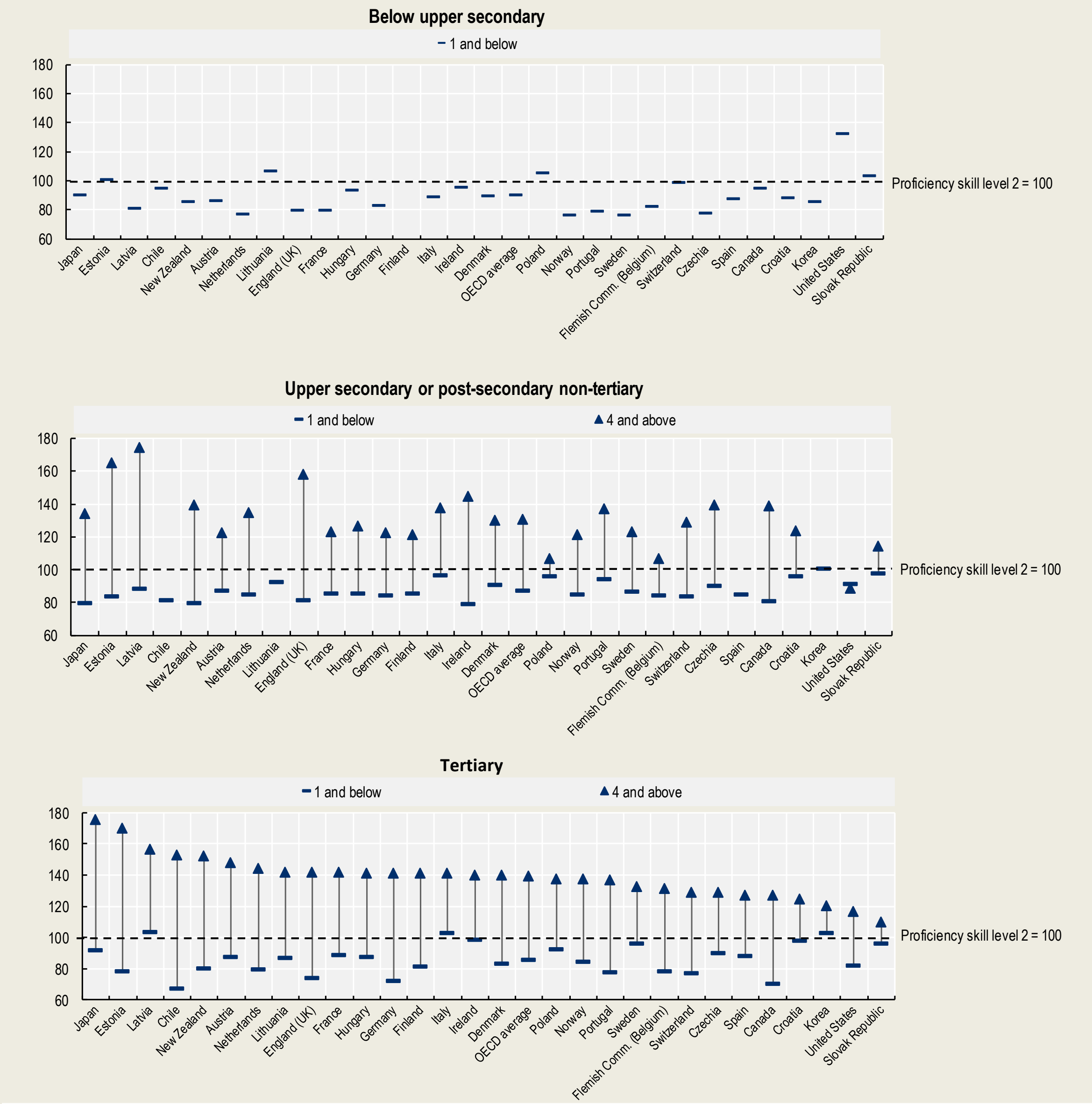
The OECD average monthly earnings for 25-64 year-old adults with below upper secondary education range from USD 3 100 for those scoring at or below Level 1 in numeracy proficiency (those who are not able to tasks involving the application of basic mathematical concepts) to USD 4 200 for those at Level 3 (those who are able to complete tasks involving more advanced mathematical reasoning). For those with upper secondary or post-secondary non-tertiary education, average earnings range from about USD 3 300 (at or below Level 1) to USD 4 900 (at or above Level 4, which includes those who are able to complete tasks involving problem-solving with intricate mathematical information) while for tertiary-educated adults the range is between USD 4 000 and USD 6 400 by skill level. Compared with 25-64 year-olds with upper secondary or post-secondary non-tertiary attainment, adults with below upper secondary education earn between 4% less (Level 3) and 8% less (at or below Level 2), while tertiary-educated adults earn between 23% more (at or below Level 1) and 34% more (at or above Level 4) (Table A4.7, available on line).

On average across OECD countries and economies with available data, high performers in numeracy (at or above Level 4) earn 31% more than those with proficiency Level 2 among those with upper secondary or post-secondary non-tertiary attainment and 40% more among those with tertiary education. Among tertiary-educated adults with high proficiency levels, the highest relative earnings are in Estonia and Japan, with an earnings premium of at least 70%. The lowest are recorded in Korea, the Slovak Republic and the United States, with 20% or less (Figure A4.6).

At the other end of the spectrum, low performers in numeracy (at or below Level 1) earn on average 14% less than those with Level 2 proficiency among those with a tertiary education, 13% less among those with upper secondary or post-secondary non-tertiary attainment and 10% less among those with below upper secondary education (Figure A4.6).

Figure A4.6. Adults’ relative earnings, by numeracy skills proficiency level and educational attainment (2023)

Survey of Adult Skills; earnings of adults with proficiency skill Level 2 = 100; 25-64 year-olds



For data, see Table A4.7, available on line. For a link to download the data, see Tables and Notes section.

Definitions

Adults refer to 25-64 year-olds; young adults refer to 25-34 year-olds. The analysis on financial returns to education considers the net present value of earnings over the lifetime of an individual limited to ages 16-64.

The **benefit-cost ratio** is total benefits relative to total costs, representing the financial benefits of attaining an additional level of education for each USD invested in it.

Direct costs are the direct expenditure on education per student during the time spent in school. Direct costs of education do not include student loans. **Private direct costs** are the total expenditure by households on education. They include net payments to educational institutions as well as payments for educational goods and services outside of educational institutions (school supplies, tutoring, etc.). **Forgone earnings** are the net earnings an individual not in education can expect.

Earnings include annual money earnings as direct payment for labour services provided, before taxes, plus work-related payments such as annual bonuses, result-related bonuses, extra pay for holidays and sick-leave pay from employer(s). Earnings do not include income from other sources, such as government social transfers, investment income, net increase in value of an owner operated business and any other income not directly related to work.

Educational attainment refers to the highest level of education successfully completed by an individual.

Fields of study are categorised according to the ISCED fields of education and training (ISCED-F 2013). See the *Reader's Guide* for full listing of the ISCED fields used in this report.

Individuals with zero earnings refer to individuals who have earnings, but the result of their business activities is exactly zero.

Individuals with negative earnings refer to individuals who reported deficits in their business activities.

Gross earnings benefits are the discounted sum of earnings premiums over the course of a working-age life associated with a higher level of education. The **income tax effect** is the discounted sum of additional levels of income tax paid by the private individual over the course of a working-age life associated with a higher level of education. The **social contribution effect** is the discounted sum of additional employee social contributions paid by the private individual over the course of a working-age life and associated with a higher level of education.

The **internal rate of return** is the (hypothetical) real interest rate equalising the costs and benefits related to the educational investment. It can be interpreted as the interest rate an individual can expect to receive every year during a working-age life on the investment made on a higher level of education.

Levels of education: See the *Reader's Guide* at the beginning of this publication for a presentation of all International Standard Classification of Education (ISCED) 2011 levels.

Net financial returns are the net present value of the financial investment in education, the difference between the discounted financial benefits and the discounted financial cost of education, representing the additional value that education produces over and above the 2% real interest that is charged on these cash flows.

Methodology

The analysis of relative earnings of the population with specific educational attainment and of the distribution of earnings does not control for hours worked, although the number of hours worked is likely to influence earnings in general and the distribution in particular. For the definition of full-time earnings, countries were asked whether they had applied a self-designated full-time status or a threshold value for the typical number of hours worked per week.

Earnings data are based on an annual, monthly or weekly reference period, depending on the country. This chapter presents annual data, and earnings data with a reference period shorter than a year are adjusted. Please refer to Table A.A4.1 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes*, for more information on the adjustment methods (https://doi.org/10.1787/fcfaf2d1-en). Data on earnings are before income tax for most countries. Earnings of self-employed people are excluded for many countries and, in general, there is no simple and comparable method to separate earnings from employment and returns to capital invested in a business.

This chapter does not take into consideration the impact of effective income from free government services. Therefore, although incomes could be lower in some countries than in others, the state could be providing both free health care and free schooling, for example. The total average for earnings (men plus women) is not the simple average of the earnings figures for men and women. Instead, it is the average based on earnings of the total population. This overall average weights the average earnings separately for men and women by the share of men and women with different levels of educational attainment.

In the earnings data, individuals with zero and/or negative earnings should be reported as earners. Individuals with negative earnings should also be considered in the calculation of the overall median earnings. However, data on individuals with zero and/or negative earnings are not available for all countries. Individuals with zero earnings are included for Belgium, Brazil, Canada, Germany, Ireland, New Zealand, Norway, Sweden, Switzerland, the Republic of Türkiye and the United States. Individuals with negative earnings are included for Belgium, Canada, Denmark, Italy, New Zealand, Norway, Spain, Sweden and the United States. Refer to the *Definitions* section for the definition of individuals with zero and negative earnings. Note that the share of both zero and negative earners are very low among full-time full-year workers in countries with available data, and this finding holds true when looking at the breakdown by educational attainment levels. The impact of the inclusion/exclusion of zero and/or negative earners is negligible on the relative earnings and the distribution of earnings.

For more information see the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018[16]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* ((https://doi.org/10.1787/fcfaf2d1-en).

In calculating the returns to education in Box A4.1, the approach taken here is the net present value (NPV) of the investment. To allow direct comparisons of costs and benefits, the NPV expresses the present value for cash transfers happening at different times. In this framework, costs and benefits during a working-age life are transferred back to the start of the investment. This is done by discounting all cash flows back to the beginning of the investment with a fixed interest rate (discount rate). The model assumes that tax rates and social contribution rates remain at today's values. Similarly, earnings and employment rates by age and educational attainment are assumed to remain at the most recent observed values.

Source

This chapter is based on the data collection on education and earnings by the OECD Network for data development on labour market, economic and social outcomes of education (LSO Network). The data collection takes account of earnings for individuals working full time and for the full year, as well as part time or part of the year, during the reference period. This database contains data on dispersion of earnings from work and on student earnings versus non-student earnings. The source for most countries is national household surveys such as Labour Force Surveys, the European Union Statistics on Income and Living Conditions (EU-SILC), or other dedicated surveys collecting data on earnings. About one-quarter of countries use data from tax or other registers. See *Education at a Glance 2025 Sources, Methodologies and Technical Notes*, for country-specific notes on national sources ((https://doi.org/10.1787/fcfaf2d1-en). Various sources have been used for Box A4.1 on financial returns to education:

- The source for the direct costs of education is the joint data collection by UNESCO, the OECD and Eurostat (UOE) on finance (year of reference 2022 unless otherwise specified in the tables). The data on gross earnings are based on the earnings data collection by the OECD Network for data development on labour market, economic and social outcomes of education (LSO Network), which compiles data from national Labour Force Surveys (LFS), the EU Statistics on Income and Living Conditions (EU-SILC), Structure of Earnings Surveys, and other national registers and surveys. Earnings are age, gender and attainment-level specific.
- Income tax data are computed using the OECD Taxing Wages model, which determines the level of taxes based on a given level of income. This model computes the level of the tax wedge on income for several

household composition scenarios. For this indicator, a single worker with no children is used. For country-specific details on income tax in this model, see *Taxing Wages 2025* (OECD, 2025[17]).

- Employee social contributions are computed using the OECD Taxing Wages model scenario of a single worker aged 40 with no children. For country-specific details on employee social contributions in this model, see *Taxing Wages 2025* (OECD, 2025[17]).

Data on proficiency levels and mean scores are based on the Survey of Adult Skills (PIAAC) (2012 and 2023). PIAAC is the OECD Programme for the International Assessment of Adult Competencies.

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Tables and Notes

Chapter A4 Tables

StatLink https://stat.link/x78130

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table A4.1. Relative earnings of workers compared to those with upper secondary attainment, by educational attainment and age group (2023)

Note: There are cross-country differences in the inclusion/exclusion of zero and negative earners. Columns showing data on relative earnings for workers with upper secondary attainment, and for 45-54 year-olds are available for consultation on line.

1. Year of reference 2022.
2. Index 100 refers to the combined levels of upper secondary or post-secondary non-tertiary education (levels 3 and 4 in the ISCED 2011 classification).
3. Includes part-time and part-year workers.
4. Earnings net of income tax for Türkiye and a combination of gross (self-employed) and net (employees) earnings for Argentina.

Table A4.2. Distribution of workers by educational attainment and level of earnings relative to the median (2023)

Note: There are cross-country differences in the inclusion/exclusion of zero and negative earners. For a given level of educational attainment, the figures by level of earnings relative to median earnings may not add up to 100% because of missing data. Columns showing data broken down by gender are available for consultation on line.

1. Year of reference: 2022.
2. Earnings net of income tax for Türkiye and a combination of gross (self-employed) and net (employees) earnings for Argentina.

Table A4.3. Women's earnings as a percentage of men's earnings, by educational attainment and age group (2023)

Note: There are cross-country differences in the inclusion/exclusion of zero and negative earners. Columns showing data for other age groups are available for consultation on line.

1. Year of reference: 2022.
2. Includes part-time and part-year workers.
3. Earnings net of income tax for Türkiye and a combination of gross (self-employed) and net (employees) earnings for Argentina.

Table A4.4. Relative earnings of tertiary-educated adults, by field of study (2023)

Note: Cross-country differences in the inclusion/exclusion of zero and negative earners. See Methodology section for more information. Columns showing data for the categories Total and more data breakdowns are available for consultation on line.

1. Year of reference differs from 2023: 2022 for Finland, 2020 for Australia, Canada, Germany, Portugal, Slovenia and the United Kingdom.
2. Earnings refer to academic programmes only.
3. Arts and humanities, social sciences, journalism and information does not include the subfield of Languages.

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table A4.1. Relative earnings of workers compared to those with upper secondary attainment, by educational attainment and age group (2023)

Adults with income from employment (full-time full-year workers); upper secondary attainment for each age group = 100

	Below upper secondary		Post-secondary non-tertiary		Tertiary							
					Short-cycle tertiary		Bachelor's or equivalent		Master's, doctoral or equivalent		Total	
	25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds	25-34 year-olds	25-64 year-olds
OECD countries	(1)	(3)	(7)	(9)	(10)	(12)	(13)	(15)	(16)	(18)	(19)	(21)
Australia	95	97	108	106	98	107	120	130	118	145	116	129
Austria	84	78	119	115	111	126	112	105	136	169	121	143
Belgium[1]	c	82	c	c	c	c	116	121	140	153	129	137
Canada[1]	88	85	124	114	112	113	135	148	145	170	129	139
Chile	84	76	a	a	114	123	197	228	263	440	176	212
Colombia[2]	72	70	m	m	m	m	m	m	m	m	205	250
Costa Rica	84	81	c	c	135	128	191	199	c	317	182	199
Czechia	83	79	m	m	97	107	123	132	143	170	135	160
Denmark	93	91	c	123	102	108	109	112	128	141	116	122
Estonia	78	85	93	93	m	94	123	137	151	156	135	142
Finland[1]	100	100	112	117	c	122	113	122	143	166	124	140
France[1, 2]	c	86	m	m	120	129	118	146	169	198	144	160
Germany	74	73	139	122	123	122	133	142	146	176	135	150
Greece	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	78	77	117	124	109	122	132	148	172	210	150	173
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland[1]	c	90	103	99	c	141	151	156	196	188	168	165
Israel[1]	77	78	a	a	103	105	145	154	142	183	135	153
Italy[1, 2]	95	81	m	m	m	m	118	105	129	141	125	133
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	109	84	a	a	104	110	116	133	152	176	114	131
Latvia	62	84	86[r]	96	96	123	133	143	156	172	135	154
Lithuania[1]	88	93	100	104	a	a	145	149	171	187	152	169
Luxembourg	79	75	c	115	115	125	143	143	157	162	151	155
Mexico	85[r]	81[r]	a	a	c	c	143[r]	149[r]	c	222[r]	145[r]	156[r]
Netherlands	91	86	114	110	109	129	119	129	142	168	129	145
New Zealand	99	91	104	101	110	110	123	131	119	146	121	132
Norway	84	86	106	99	104	118	99	106	115	133	106	118
Poland[1]	89	86	98	103	a	a	133	142	139	158	137	154
Portugal	87	84	115	114	119	113	m	m	m	m	158	174
Slovak Republic[2]	92	84	m	m	106	124	115	125	129	158	127	154
Slovenia[3]	85	83	a	a	113	129	125	136	151	179	133	157
Spain	90	82	c	96[r]	116	111	139	140	168	176	145	149
Sweden	91	86	96	113	104	108	107	115	124	143	112	125
Switzerland[2]	83	82	m	m	x(13, 16)	x(15, 18)	127[d]	134[d]	144[d]	167[d]	135	150
Türkiye[2, 4]	81	77	a	a	m	m	m	m	m	m	133	149
United Kingdom[2]	57	72	a	a	106	107	128	137	157	154	135	138
United States	100	79	m	m	111	113	157	164	195	218	157	171
OECD average	85	83	106	109	109	117	131	139	151	183	138	154
Partner and/or accession countries												
Argentina[4]	90	87	a	a	126	130	157	175	240	246	151	163
Brazil[2]	77	74	a	a	m	m	m	m	m	m	213	248
Bulgaria[1]	63	71	c	117[r]	a	a	133	144	173	191	151	176
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru[1, 2]	76	73	m	m	m	m	m	m	m	m	146	167
Romania	96	91	123	124	m	m	m	m	m	m	138	141
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	60[r]	54[r]	c	203[r]	c	c	c	320[r]	c	c	294[r]	351[r]
EU25 average	85	84	m	111	110	120	126	133	151	170	137	151
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A4.2. Distribution of workers by educational attainment and level of earnings relative to the median (2023)

Median earnings from work for 25-64 year-olds with income from employment (full- and part-time workers)

	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	At or below half the median	More than half the median but at or below the median	More than the median but at or below 1.5 times the median	More than 1.5 times the median but at or below twice the median	More than twice the median	At or below half the median	More than half the median but at or below the median	More than the median but at or below 1.5 times the median	More than 1.5 times the median but at or below twice the median	More than twice the median	At or below half the median	More than half the median but at or below the median	More than the median but at or below 1.5 times the median	More than 1.5 times the median but at or below twice the median	More than twice the median
OECD countries	(1)	(4)	(7)	(10)	(13)	(16)	(19)	(22)	(25)	(28)	(31)	(34)	(37)	(40)	(43)
Australia	19	46	22	7	6	17	44	23	10	7	12	32	27	15	13
Austria	30	46	19	3	1	17	33	31	12	7	13	20	22	20	26
Belgium	28	52	17	2	1	16	48	28	6	3	7	26	38	17	12
Canada[1]	38	31	19	8	5	29	29	22	10	10	22	22	21	16	19
Chile	29	50	15	4	2	16	44	22	9	8	6	18	19	16	42
Colombia	44	35	13	6	2	23	31	26	14	6	7	13	15	22	43
Costa Rica	25	46	23	4	2	17	37	30	10	7	6	12	22	14	47
Czechia	14	64	18	3	1	6	52	32	8	3	2	21	39	18	20
Denmark	33	38	23	4	2	17	38	33	8	4	14	26	37	13	10
Estonia	23	45	21	6	5	20	40	23	9	8	13	23	27	16	20
Finland[1]	31	38	22	6	4	20	41	29	7	3	12	24	33	17	15
France[1]	33	38	22	5	3	20	33	32	9	5	10	16	30	20	25
Germany	44	40	13	2	2	19	41	28	7	4	12	21	29	18	20
Greece	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	27	54	15	3	1	9	48	28	10	6	4	21	31	17	28
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland[1]	36	33	18	7	7	24	35	24	9	9	14	20	20	19	27
Israel[1]	27	47	18	5	3	20	41	21	9	9	11	23	24	15	27
Italy[1]	28	37	24	7	4	19	31	29	12	9	12	23	28	17	20
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	22	56	19	c	c	11	50	29	7	3	6	33	34	14	13
Latvia	26	46	20	c	c	15	49	22	8	5	5	29	29	16	21
Lithuania[1]	20	51	21	6	2	17	48	23	8	4	12	22	25	18	22
Luxembourg	34	54	c	c	c	16	46	24	9	c	5	19	28	26	21
Mexico	28	39	22	7	5	16[r]	34[r]	29[r]	10[r]	11[r]	7[r]	16[r]	29[r]	16[r]	32[r]
Netherlands	32	37	23	6	2	21	37	26	11	5	12	21	28	19	19
New Zealand	26	37	26	7	5	22	34	27	10	8	15	24	27	16	18
Norway	53	30	13	3	1	24	37	28	8	4	17	24	37	13	10
Poland[1]	0	74	19	4	2	0	61	26	8	4	0	30	35	16	19
Portugal	9	57	24	6	3	7	46	30	9	8	3	15	27	20	36
Slovak Republic	27	45	21	5	2	m	m	m	m	m	9	16	27	22	27
Slovenia	9	71	17	2	1	6	56	29	7	3	3	24	31	22	20
Spain	28	42	22	5	3	22	36	23	9	9	12	22	21	17	27
Sweden	25	46	23	4	1	16	37	34	9	4	13	25	37	15	10
Switzerland	27	54	17	1	c	21	42	30	5	2	9	23	34	19	15
Türkiye[2]	28	50	17	3	2	17	40	26	11	7	12	19	24	23	23
United Kingdom	18	58	18	3	2	14	51	25	6	4	7	34	32	14	13
United States	42	42	11	2	2	25	42	19	7	6	12	24	22	16	25
OECD average	28	47	19	5	3	17	42	27	9	6	10	22	28	17	22
Partner and/or accession countries															
Argentina[2]	35	34	18	7	5	24	34	25	8	8	12	20	22	18	28
Brazil	57	25	10	4	3	35	29	17	8	11	17	11	14	12	45
Bulgaria[1]	43	38	13	4	1	18	38	24	11	9	7	20	19	19	36
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru[1]	48	18	16	9	9	34	14	20	14	18	26	8	14	12	40
Romania	c	73	20	7	c	0	59	29	11	0	c	18	34	46	2
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	35[r]	40[r]	12[r]	5[r]	8[r]	13[r]	29[r]	14[r]	7[r]	37[r]	3[r]	6[r]	4[r]	5[r]	83[r]
EU25 average	26	49	20	5	2	15	43	28	9	5	9	22	29	19	21
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A4.3. Women's earnings as a percentage of men's earnings, by educational attainment and age group (2023)

Average earnings of adults with income from employment (full-time full-year workers)

	Below upper secondary			Upper secondary or post-secondary non-tertiary			Tertiary		
	25-64 year-olds	25-34 year-olds	45-54 year-olds	25-64 year-olds	25-34 year-olds	45-54 year-olds	25-64 year-olds	25-34 year-olds	45-54 year-olds
OECD countries	(1)	(2)	(4)	(6)	(7)	(9)	(11)	(12)	(14)
Australia	89	100	92	83	85	85	86	92	88
Austria	80	82	80	85	85	81	77	86	79
Belgium[1]	78[r]	c	c	81	92[r]	76[r]	85	91	88
Canada[1]	73	74	77	72	71	73	77	84	76
Chile	83	83	82	79	84	74	73	85	69
Colombia	86	82	88	85	89	83	80	87	75
Costa Rica	84	93	80	85	89	78	92	77	95
Czechia	85	91	82	84	84	82	74	80	70
Denmark	81	79	80	80	79	78	78	86	74
Estonia	75	82	66	73	71	72	77	82	77
Finland[1]	81	88	78	79	83	75	76	85	72
France[1]	80	c	82	79	81	76	73	82	67
Germany	79	c	c	81	78	84	74	88	61
Greece	m	m	m	m	m	m	m	m	m
Hungary	87	93	86	86	85	86	68	75	64
Iceland	m	m	m	m	m	m	m	m	m
Ireland[1]	71	c	c	89	98[r]	91	68	78	75
Israel[1]	65	c	c	69	68	64	68	64	72
Italy[1]	80	79	81	84	87	83	76	85	74
Japan	m	m	m	m	m	m	m	m	m
Korea	75	c	75	75	85	70	74	88	70
Latvia	64	c	c	71	60	80	71	67	67
Lithuania[1]	84	81	79	83	80	81	80	82	79
Luxembourg	79	c	77	91	89	97	82	90	83
Mexico	79[r]	79[r]	78[r]	79[r]	78[r]	83[r]	82[r]	86[r]	76[r]
Netherlands	87	100	80	85	87	86	82	90	88
New Zealand	82	80	86	81	78	83	80	89	74
Norway	83	84	80	79	78	78	77	86	76
Poland[1]	76	77	74	78	77	76	72	76	70
Portugal	82	90	78	79	85	75	73	80	72
Slovak Republic	79	89	81	79	79	78	75	81	72
Slovenia[2]	85	86	84	85	82	85	82	79	83
Spain	76	77	75	79	83	79	81	88	79
Sweden	85	85	83	83	84	81	80	86	76
Switzerland	84	91	84	85	92	83	82	92	84
Türkiye[3]	73	76	74	78	79	78	81	88	83
United Kingdom	73	65	69	75	70	80	80	80	81
United States	72	57	85	77	82	75	75	79	69
OECD average	79	83	80	80	82	80	77	83	76
Partner and/or accession countries									
Argentina[3]	55	55	51	72	71	79	75	75	78
Brazil	75	78	71	71	79	65	68	73	68
Bulgaria[1]	99	90[r]	93	85	88	81	78	64	84
China	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m
Peru[1]	66	58	69	73	71	65	78	82	78
Romania	83	81	84	88	87	89	93	88	94
Saudi Arabia	m	m	m	m	m	m	m	m	m
South Africa	69[r]	c	67[r]	78[r]	79[r]	75[r]	76[r]	c	c
EU25 average	81	85	80	82	83	81	77	82	76
G20 average	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A4.4. Relative earnings of tertiary-educated adults, by field of study (2023)

25-64 year-olds with income from employment (full-time full-year workers); all fields = 100

		Arts and humanities, social sciences, journalism and information			Business, administration and law		Science, Technology, Engineering et Mathematics (STEM)			Health and welfare		
	Education	Arts	Humanities (except languages)	Social sciences, journalism and information	Business and administration	Law	Natural sciences, mathematics and statistics	Information and communication technologies (ICT)	Engineering, manufacturing and construction	Health (medical and dental)	Health (nursing and associate health fields)	Other fields
OECD countries	(1)	(2)	(3)	(4)	(6)	(7)	(9)	(10)	(11)	(13)	(14)	(16)
Australia[1]	88	m	m	96	m	m	103	99	110	m	m	84
Austria	83	m	m	94	m	m	102	106	100	m	m	76
Belgium	m	m	m	m	m	m	m	m	m	m	m	m
Canada[1]	85	74	91	98	110	141	105	108	109	120	88	84
Chile	70	m	m	112	m	m	125[r]	106	120	m	m	73
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	107	71	53	101	91	99	138	118	100	m	m	79
Czechia	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	81	m	m	107	m	m	111	105	110	m	m	92
Estonia	83	76	84	112	95	105	105	167	95	178	91	88
Finland[1]	85	81	88	106	100	146	103	113	116	166	78	90
France	m	m	m	m	m	m	m	m	m	m	m	m
Germany[1, 2]	73	68	71	81	105	108	97	96	120	139	117	78
Greece	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	m	m	m	m	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m
Israel	m	m	m	m	m	m	m	m	m	m	m	m
Italy	m	m	m	m	m	m	m	m	m	m	m	m
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	92	84	86	100	m	m	106	106	110	m	m	86
Latvia	74	75	108	100	110	98	93	167	105	110	102	84
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
Luxembourg	99	65	108	95	102	118	94	102	97	m	m	90
Mexico	84	93	93	93	108	97	109	101	106	119	90	88
Netherlands	m	m	m	m	m	m	m	m	m	m	m	m
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m
Norway	78	78	85	107	110	114	111	107	119	141	82	101
Poland	m	m	m	m	m	m	m	m	m	m	m	m
Portugal[1, 3]	70	70	81	93	108	112	101	113	108	m	m	78
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia[1]	84	89	79	96	97	110	108	107	104	169	112	89
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden	79	82	86	92	117	125	100	104	112	131	85	92
Switzerland	84	73	96	107	108	124	104	107	98	140	80	76
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m
United Kingdom[1]	83	m	m	91	m	m	92	117	122	m	m	84
United States	65	77	96	101	107	90	117	118	122	m	m	80
OECD average	m	m	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

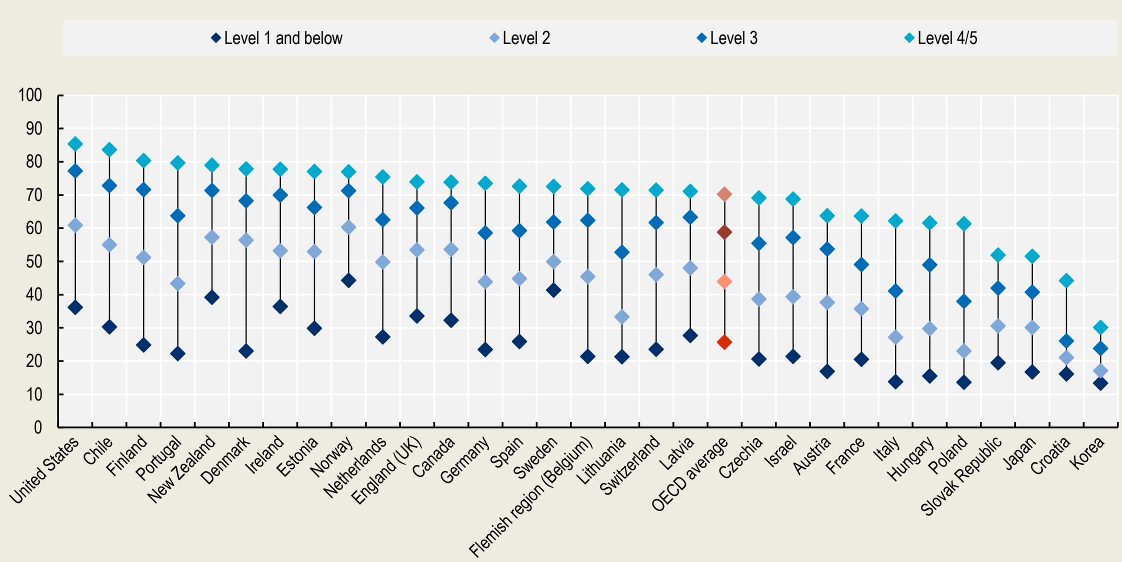
Chapter A5. To what extent do adults participate in education and training?

Highlights

- On average, there is a 45 percentage point difference in the rates of participation in adult learning between those with the highest literacy proficiency levels (at or above Level 4) and those with the lowest (at or below Level 1), as determined by the Survey of Adult Skills.
- Even among those with the same level of education, skills proficiency helps drive engagement in adult learning. On average, 74% of tertiary-educated adults with the highest proficiency levels in adaptive problem-solving (Level 4) participated in adult learning compared to just 42% of their similarly educated peers with the lowest levels (at or below Level 1).
- Educational attainment amplifies the connection between the regular use of skills and participation in adult learning. Among adults who read the most frequently in their everyday lives, 68% of those with tertiary education engage in training, compared to just 42% of those whose highest qualification is below upper secondary.

Figure A5.1. Participation in education and training, by literacy proficiency level (2023)

Survey of Adult Skills (PIAAC); 25-64 year olds; participation in the last 12 months; in per cent



For data, see Table A5.1. For a link to download the data, see Tables and Notes section.

Context

Participation in adult learning provides adults who have finished their initial education with additional skills that may help keep them connected to an ever-evolving technological landscape. In the current global economy, adults are likely to need to keep upskilling and reskilling throughout their lives in response to this rapid technological change in order to maintain a favourable position in the labour market (Kazepov, Cefalo and Pot, 2019[1]). As well as the benefits of increased human capital and employability, adult learning also has potential non-monetary returns such as increased civic participation, which in turn often promotes social cohesion at a societal level (Rüber, Rees and Schmidt-Hertha, 2018[2]). These economic and social benefits underscore the importance of adult learning as a vital component of lifelong education systems.

Many OECD and partner countries have identified adult learning, or lifelong learning, as important for economic growth and equal access to opportunity. For example, the European Pillar of Social Rights Action Plan set the goal of having 60% of all adults in the European Union participating in adult learning by 2030 (European Commission, 2021[3]). The United States' Workforce Innovation and Opportunity Act, and Canada's regional adult learning initiatives aim to increase access to the labour market as well as to monitor the success of adult learning initiatives (Sekmokas et al., 2024[4]).

Adult learning programmes and initiatives are not guaranteed to bridge educational and skills gaps (Lee and Morris, 2016[5]). Although participation in adult learning can help close those gaps and better prepare the workforce, skills disparities are persistent and inequalities are evident when looking at skills proficiency and participation in adult learning (Janmaat and Green, 2013[6]). There are several data sources available with data on internationally comparable indicators of adult learning participation, of which three are discussed in Box A5.1. This chapter highlights the results of the 2023 Survey of Adult Skills (a product of the Programme for the International Assessment of Adult Competencies; PIAAC) which provides insight on participation in adult learning in relation to skills proficiency and use (OECD, 2024[7]).

Other findings

- Reported rates of participation in adult learning vary across the Survey of Adult Skills (PIAAC), the EU Adult Education Survey (EU-AES) and the EU Labour Force Survey (EU-LFS); however, the demographic patterns revealed through these data are consistent across the three surveys (Box A5.1).
- Work by the Nordic-Baltic PIAAC network connecting PIAAC data with national register data finds that individuals who achieved higher grades in lower secondary education are more likely to demonstrate numeracy proficiency at or above Level 3 in the Survey of Adult Skills (Box A5.2).
- The use of skills and participation in adult learning show similar patterns regardless of the context of skills use. Adults who use reading skills infrequently in everyday life have virtually the same participation in adult learning (24%) as those who report using them infrequently in the workplace (27%), on average across the OECD.

Analysis

Adult learning sits at the intersection of human capital development and social inclusion. Participation in formal and/or non-formal education and training may provide adults with the skills they need to succeed and thrive in the labour market. Research, however, reveals the persistence of the "Matthew effect" of cumulative advantage and disadvantage. As a result of persistent barriers and non-participation, adults with lower skills proficiency or lower levels of formal education remain difficult to engage in adult-learning opportunities, while those with higher skills proficiency and educational attainment may continue to benefit from well-established learning networks (Broek et al., 2023[8]).

This challenge is now compounded by the rapid spread of artificial intelligence (AI) in both the workplace and everyday life. While there remains debate over precisely how AI will affect the labour market and need for skills, the consensus is that transformations will take place – and indeed have already begun. It is likely that AI will change the tasks people perform in their jobs and therefore affect the skills they need. This will include increasing the need for basic digital and data science skills combined with complementary cognitive skills (OECD, 2023[9]). Additional research into workplace task changes between 2012 and 2024 shows that demand has especially increased for tasks that were already important in 2012, such as analytical tasks like mathematics and problem-solving, with evidence indicating that problem-solving skills improve mainly through informal adult learning in the workplace (Weel, 2025[10]). These skills, as well as literacy, numeracy and adaptive problem-solving skills will remain critical for individuals and economies in the era of AI (OECD, 2024[7]). Recent OECD work on AI capability indicators has introduced a framework for assessing the development of AI in relation to human capabilities, helping policymakers anticipate which human skills will remain essential or become more valuable as AI systems advance (OECD, 2025[11])

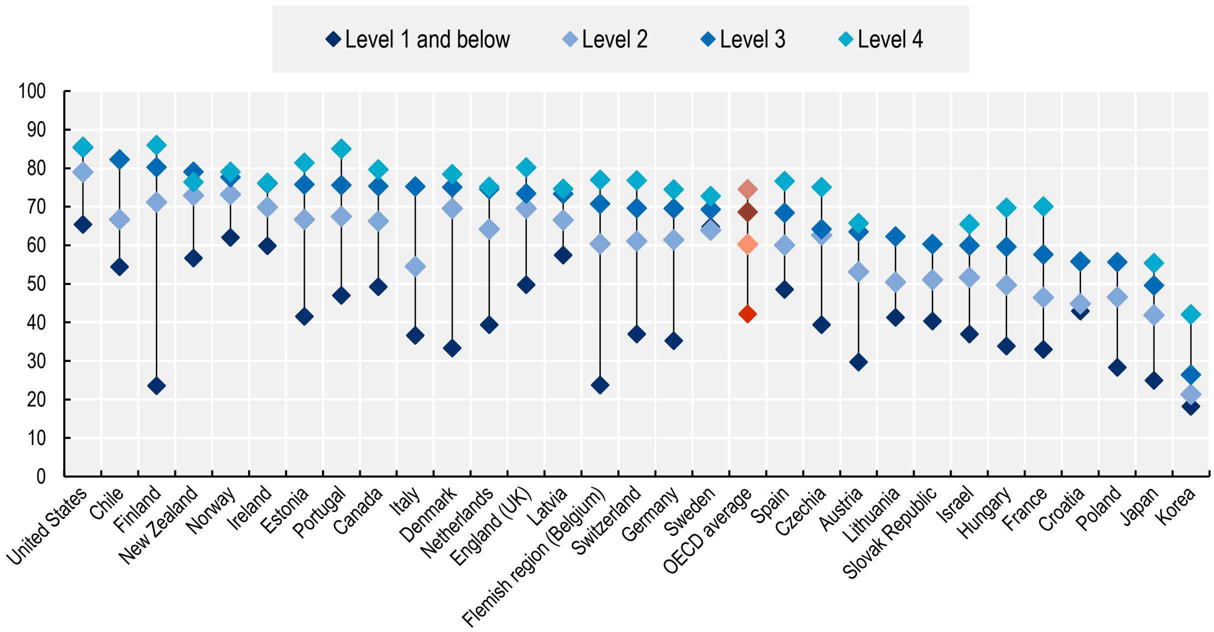
Participation in adult learning and skills proficiency

To prepare for a changing skills landscape, it is useful to understand the relationship between skills proficiency and participation in adult learning. Adults with higher proficiency levels in literacy have higher rates of participation in adult learning across all OECD countries. On average 26% of adults with low literacy proficiency (at or below Level 1) participate in adult learning compared to 70% of adults with high literacy proficiency (at or above Level 4). That makes adults with high literacy skills more than 2.5 times more likely to participate in formal and/or non-formal education and training. While it is true for all OECD countries that participation increases with proficiency level, there are differences in overall rates of participation between countries. For example, in Korea, even adults with a literacy proficiency of Level 4 and above participate less frequently than the OECD average for adults with Level 2 (Figure A5.1). This could be due to the common practice of working long hours which leaves reduced time for participating in additional training or learning opportunities (Hijzen and Thewissen, 2020[12]).

Adults with higher educational attainment are also more likely to participate in adult learning, but by isolating participation rates to a given attainment level, it is possible to see that the relationship between proficiency and participation persists. Across all participating OECD countries and economies there are differences by skill proficiency level among people with the same level of education. For example, on average, 74% of tertiary-educated adults with Level 4 proficiency in adaptive problem-solving participate in formal and/or non-formal education and training, 32 percentage points more than among tertiary-educated adults with proficiency at or below Level 1 (42%). For most countries, the difference in participation rates is smaller between tertiary-educated adults with proficiency Levels 2, 3 or 4 and most pronounced between these three levels of proficiency and those who are at or below Level 1. It is important to note that socio-demographic factors, such as language proficiency and migration background, can influence skill assessment outcomes. These factors may vary between countries and could partly explain differences in participation rates among tertiary-educated adults by proficiency level (Figure A5.2).

Figure A5.2. Participation of tertiary-educated adults in education and training, by adaptive problem-solving proficiency level (2023)

Survey of Adult Skills (PIAAC); 25-64 year olds; participation in the last 12 months; in per cent



For data, see Table A5.1. For a link to download the data, see Tables and Notes section.

Having a higher level of educational attainment does not equalise participation rates, as skill proficiency still helps to drive engagement. Belief in one's abilities, or self-efficacy, is key motivator for participating in lifelong learning initiatives and those with lower proficiency may feel less confident to up- or reskill (Boeren, 2017[13]). Moreover, adults with lower proficiency levels may be more likely to be outside the labour force or to be in precarious working conditions that provide less frequent or inconsistent training opportunities (Cedefop, 2017[14]). Understanding how individuals navigate adult learning systems is therefore crucial as it reveals how to shape policies that both empower learners and strengthen an adult learning system's capacity to deliver effective upskilling (Broek et al., 2023[8]).

Box A5.1. Comparing participation rates in adult learning across international surveys

Studying adult participation in education and training is crucial for developing effective lifelong learning policies. International surveys are valuable tools for developing relevant adult learning indicators, but methodological differences significantly affect the comparability of surveys. Understanding these differences may strengthen the development of adult learning indicators and help clarify the best use cases for each survey's data.

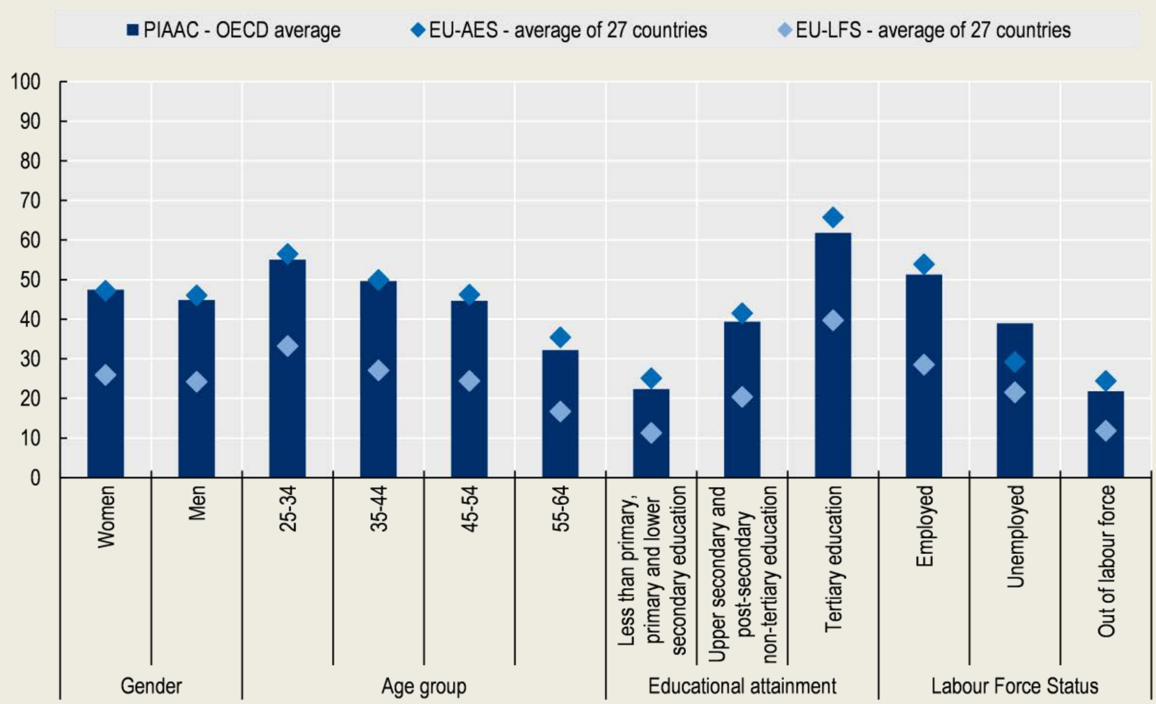
The three surveys covered in this box – the Survey of Adult Skills (PIAAC), the EU Adult Education Survey (EU-AES) and the EU Labour Force Survey (EU-LFS) – all cover 25-64 year-olds and provide participation rates in formal and/or non-formal education over a 12 month period. Historically, the EU-LFS measured participation in the 4 weeks prior to the survey; however, since 2021, EU-LFS is obligated to at least biannually collect data on participation in the last 12 months (Regulation (EU) 2019/1700). Accordingly, this box uses EU-LFS data based on the 12 month reference period.

Overall, the three surveys differ in their definitions, question wording, survey design, primary objectives and data collection methods. These methodological differences can lead to differences in reported participation rates across the surveys. Furthermore, while the Survey of Adult Skills is input harmonised (using identical questionnaires and methods across countries), EU-AES and EU-LFS are output harmonised, allowing for national adaptations to data collection methods and question ordering, which can further affect comparability.

One significant way in which these three surveys differ is when taking into account guided on-the-job training, a form of workplace training in which a trainee receives real-time feedback or demonstrations as they perform their tasks. The Survey of Adult Skills and EU-AES both count guided on-the-job training but the EU-LFS survey does not, thus creating a potential source of discrepancy between reported levels of participation. This difference is apparent across most countries participating in all three surveys.

Figure A5.3. Average participation in education and training, by survey, gender, age group, educational attainment and labour force status

Survey of Adult Skills (PIAAC) 2023; EU-AES 2022 and EU-LFS 2022



Note: Education and training refers to formal and/or non-formal education and training. EU-AES is the EU Adult Education Survey; EU-LFS is the EU Labour Force Survey. The data in the chart refer to participation over the past 12 months for all three surveys.

Despite the differences in participation rates among the three surveys, they all show the following demographic patterns in participation in education and training (Figure A5.3):

- Gender: Across all surveys, women typically exhibit slightly higher rates of participation than men. Estonia, Finland, Latvia and Sweden consistently show substantial gender differences favouring women, whereas Czechia and Italy report higher rates for men.
- Age: Younger adults (25-34 year-olds) consistently have higher participation than older adults (55-64 year-olds). Participation rates decline with age across all surveys and countries.
- Educational attainment: Adults with tertiary education participate significantly more than those with lower education levels, emphasising persistent disparities. This is evident across all surveys and countries.
- Labour-force status: Adults in employment participate significantly more than those who are unemployed or outside the labour force. This is evident across almost all surveys and countries.

These consistent demographic patterns show that despite differences in their reported rates, all three surveys are able to capture important underlying trends in adult learning participation. Nevertheless, identifying the unique strengths of each survey is important for making the best use of their data for the development of relevant indicators on adult learning. According to Eurostat, for example, the EU-AES generally provides a more accurate measure of overall participation in adult learning, while the EU-LFS could be particularly valuable for analysing trends and conducting detailed cross-sectional analyses due to its larger sample size and more frequent data collection (Eurostat, 2024[15]). Meanwhile, the Survey of Adult Skills uniquely links participation in adult learning to skills proficiency and use, offering insights which the other two surveys can not.

Recognising the differences in reported rates, efforts are underway at the European level to improve data collection methods, including revisions to survey instruments. Belgium, for example, recently introduced changes in the 2024 Labour Force Survey to improve how non-formal learning is captured, which may introduce a break in the series, but will improve the measurement of adult learning over time (Statistics Belgium, 2025[16]). Better data are essential to build a more complete and nuanced understanding of how, where and why adults engage in learning throughout their lives.

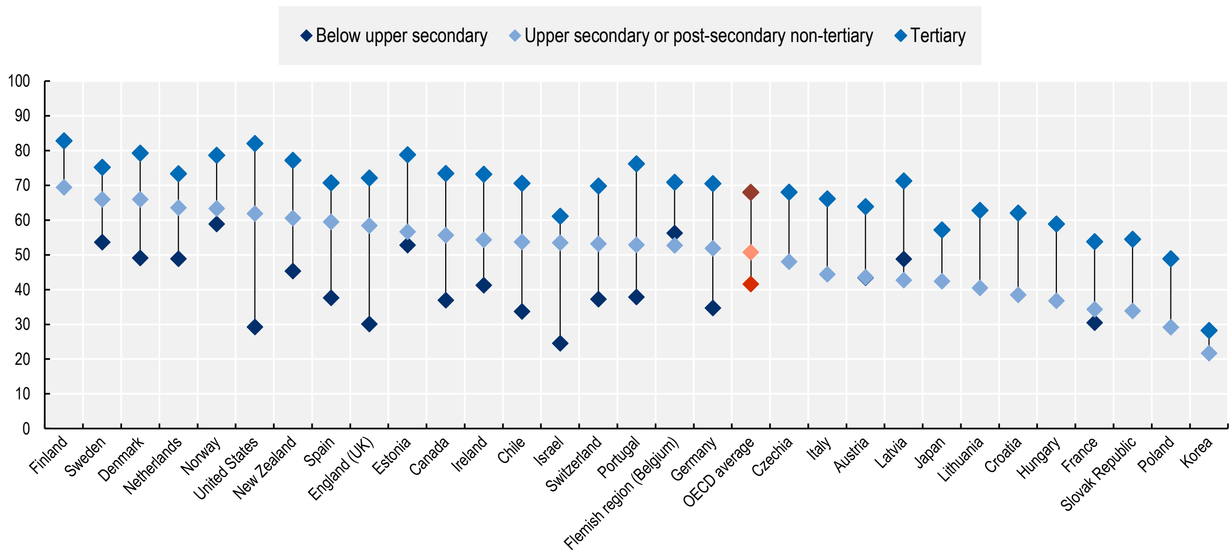
Participation in adult learning and frequency of use of skills in everyday life

Use of core skills outside of the workplace such as reading instructions, managing personal finances or navigating the Internet reinforces the learning gained from initial education. Research suggests that the relationship between proficiency and engagement in practice is reciprocal, meaning that increased use of a skill is likely to increase an individual's proficiency, which in turn further increases that individual's likelihood of continuing to use the skill and engage in learning (Reder, Gauly and Lechner, 2020[17]).

Across all levels of education, adults who use reading skills the most frequently in their everyday lives are about 2.4 times more likely to participate in adult learning than those who use them the least frequently. However, as Figure A5.4 shows, educational attainment further increases participation in adult learning among people who frequently exercise their skills. On average across OECD countries and economies, 68% of tertiary-educated adults who make high use of their reading skills participate in adult learning compared to about 42% of adults of the highest frequency of use but with below upper secondary attainment. That is a 26 percentage point difference in participation between the highest and lowest levels of educational attainment (Figure A5.4 and Table A5.2.).

Figure A5.4. Participation in education and training among adults who use reading skills the most frequently in everyday life, by educational attainment (2023)

Survey of Adult Skills (PIAAC); 25-64 year olds; participation in the last 12 months; in per cent

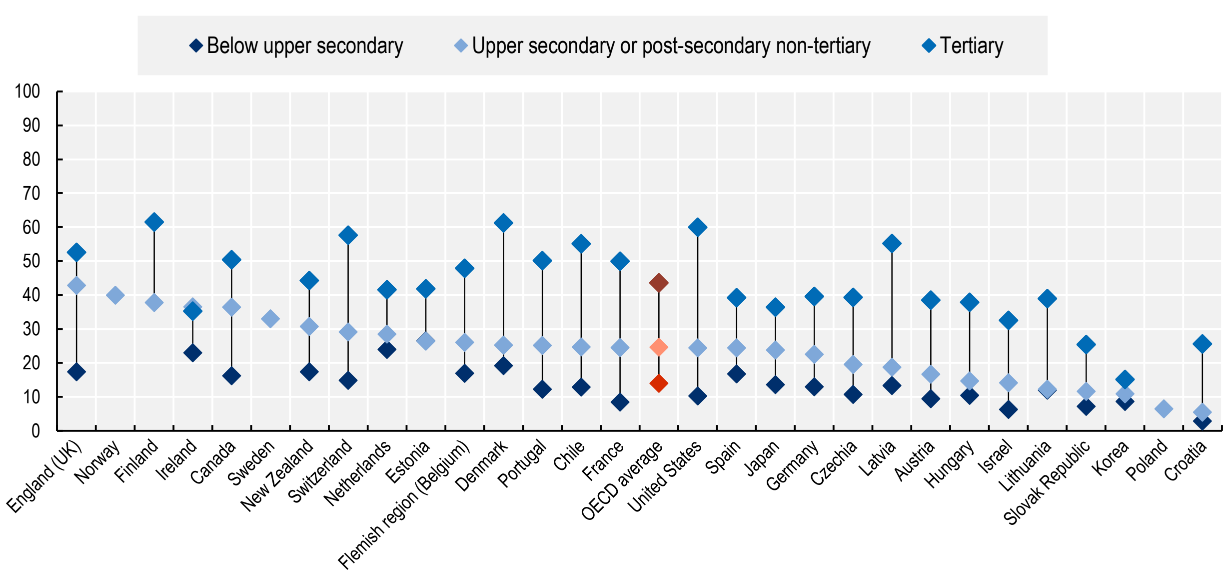


For data, see Table A5.2. For a link to download the data, see Tables and Notes section.

The same phenomenon is found among adults who use reading skills the least in the context of everyday life. On average, 44% of adults with tertiary attainment who use reading skills the least frequently in everyday life participate in adult learning compared to only 14% of adults in the same situation with below upper secondary attainment (Figure A5.5).

Figure A5.5. Participation in education and training among adults who use reading skills the least frequently in everyday life, by educational attainment (2023)

Survey of Adult Skills (PIAAC); 25-64 year olds; participation in the last 12 months; in per cent



For data, see Table A5.2. For a link to download the data, see Tables and Notes section.

Differences in participation rates based on the frequency of everyday skill use among adults with the same levels of attainment highlight how both factors work together to drive engagement. For example, among tertiary-educated adults, those who read the least frequently in everyday life are about 1.6 times less likely to participate in adult learning than their peers who read the most frequently. This gap increases to about 2.1 times less for those who have upper secondary attainment and 3 times less for those with below upper secondary attainment (Table A5.2.).

Box A5.2. Tracking PIAAC respondents using register data: Analysis from Denmark, Norway and Sweden

Integrating data from the Survey of Adult Skills (PIAAC) with data from national registers - centralized government databases containing demographic, civil-status, and residential information - provides powerful analytical tools for exploring the relationship between adult skills, educational outcomes and labour-market trajectories. The Nordic-Baltic PIAAC Network has pioneered efforts to use such linked data, enhancing the depth and accuracy of longitudinal analyses. This textbox will provide an example of how these combined data may be useful in understanding skills and lifelong learning.

The approach developed by the network involves matching individual survey respondents with their corresponding register data using personal identification numbers. This method enables individuals' education pathways and labour-market experiences to be tracked over an extended timeframe, from 1990 to 2023. The registers provide valuable background information such as grade point averages (GPAs) from lower secondary school.

The analyses demonstrate the possibility of combining cross-sectional data from the Survey of Adult Skills with annual administrative data from registers to establish a longitudinal picture of individuals both before and after they took part in the survey:

- Before participating: Education pathways from lower secondary school to tertiary education, grade point average from lower secondary education and labour-market experience.
- PIAAC information: Detailed information from the background questionnaire and measured adult skills.
- After participating: Participation in further education (second chance, post-secondary and tertiary education), being neither employed nor in education or training (NEET), labour-market status, weak or strong affiliation to the labour market, total hours worked and earnings.

Analyses based on PIAAC Cycle 2 (2023) data in Sweden have revealed important relationships (Figure A5.6) (Statistics Sweden, n.d.[18]):

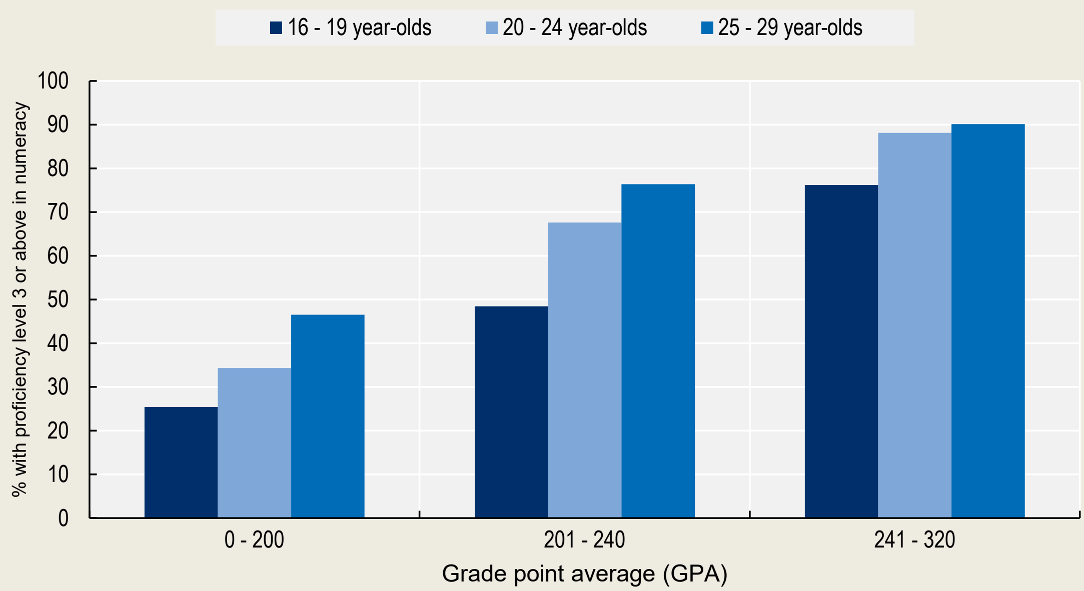
- There is a strong link between GPA at the end of lower secondary education (15-16 years-old) and adult skills (16-29 years-old). Individuals who achieved higher GPAs in lower secondary education are more likely to demonstrate numeracy proficiency at or above Level 3 as adults.
- Conversely, those who had lower GPAs during adolescence (15-16 years-old) are more likely to have numeracy proficiency at or below Level 1, highlighting the predictive nature of early skills.
- Irrespective of GPAs, a greater share of 25-29 year-olds performed at or above Level 3 in numeracy proficiency, compared to the 16-19 year-old cohort.

Two further studies also combined data from Cycle 1 of the Survey of Adult Skills with register data: one conducted in Denmark and one in Norway (Nordic Baltic PIAAC Network, 2024[19]).

The Norwegian study investigated the relationship between adult skills among 16-24 year-olds as measured in Cycle 1 of the Survey of Adult Skills and their NEET status in 2013, two years after the cycle was conducted (Barth et al., 2019[20]). Analysts found that young adults' skills measured in PIAAC Cycle 1 are highly correlated with skills acquired early in life, measured as their GPA at the end of compulsory school. These results are consistent with the results from the Swedish study based on PIAAC Cycle 2. The study also found that early skills, as measured by the GPA, protect more against being NEET in 2013, compared to adult skills measured in PIAAC Cycle 1, despite these adult skills having been measured more recently.

Figure A5.6. Share of young adults in Sweden with numeracy proficiency at or above Level 3, by lower secondary grades and age group (2023)

Survey of Adult Skills (PIAAC)



Note: GPAs in lower secondary education are measured from 0 to 320.
Source: Swedish National Registry.

The Danish study investigated whether skill levels and use of skills made a difference to low-skilled workers' employment. The target population for the study was low-skilled unemployed workers in PIAAC Cycle 1. The study combined data from Cycle 1 with register data about total hours worked over the period 2012-19 (Rotger, Jeppesen and Larsen, 2022[21]). The study found that use of IT skills outside work was one of the most predictive factors for the number of hours worked by this group during this period. The more these individuals used IT skills outside work, the greater their likelihood of working many hours during 2012-19. Other factors which affect the likelihood positively were their hourly wages in their previous job, number of job-search activities within four weeks and whether they were in full-time employment before they became unemployed.

In summary, linking PIAAC and register data provides unique research possibilities. The relationship between skills acquired early in life, adult skills and subsequent labour-market outcomes underscores the value of investing in early education and continuous skill development through lifelong learning initiatives.

Participation in adult learning and frequency of use of skills in the workplace

Adults working in a role which is well matched to their skills will be asked to use their skills frequently in the workplace. This gives them a structural motivation to engage in skills use compared to their everyday lives, where they will have greater autonomy over which skills they engage with and how often they do so. Despite this, skill use in both the workplace and everyday life produce similar patterns in participation in adult learning. On average across OECD countries and economies, 59% of those who make use of their reading skills the most frequently in everyday life participate in adult learning, compared to 66% among those who do so in the workplace. Participation rates fall to 24% among adults who use reading skills the least frequently in everyday life and 27% among those who rarely or never do so in the workplace (Table A5.2. and Table A5.3.).

Motivation, opportunity and engagement form an interconnected system that spans both everyday life and the workplace with recent technological shifts only deepening that connection. As remote and hybrid work arrangements turn many homes into offices, the boundary between personal and professional learning contexts has begun to blur. At the same time, the digital revolution and expansion of digital access has transformed how adult learning is created and delivered, enabling programmes to reach learners wherever they are and helping reach individuals who are most difficult to reach (ITC, 2021[22]). Technology alone, however, is not enough to transform adult learning systems. Although engagement varies by skills proficiency and educational attainment, participation in adult education remains insufficient at all levels as training struggles to meet the pace of technological change. Effective adult learning systems must engage all populations by offering accessible, high-quality learning opportunities that meet diverse needs in response to rapidly changing demands.

Definitions

Adults refer to 25-64 year-olds.

Adult learning means the participation of adults in lifelong learning. In this chapter, the term "adult learning" is used interchangeably with the term "education and training" and refers to formal and/or non-formal education and training. Adult learning usually refers to learning activities after the end of initial education. The participation in education and training covers participation in both formal and non-formal education and training, defined in the Classification of Learning Activities (CLA) (Eurostat, 2016[23]) as:

- **Formal education and training** is defined as "education that is institutionalised, intentional and planned through public organisations and recognised private bodies, and - in their totality - constitute the formal education system of a country. Formal education programmes are thus recognised as such by the relevant national education or equivalent authorities, e.g. any other institution in cooperation with the national or sub-national education authorities. Formal education consists mostly of initial education [...]. Vocational education, special needs education and some parts of adult education are often recognised as being part of the formal education system. Qualifications from formal education are by definition recognised and, therefore, are within the scope of ISCED. Institutionalised education occurs when an organisation provides structured educational arrangements, such as student-teacher relationships and/or interactions, that are specially designed for education and learning".
- **Non-formal education and training** is defined as "education that is institutionalised, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or complement to formal education within the process of lifelong learning of individuals. It is often provided in order to guarantee the right of access to education for all. It caters to people of all ages but does not necessarily apply a continuous pathway structure; it may be short in duration and/or low-intensity; and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognised as formal or equivalent to formal qualifications by the relevant national or sub-national education authorities or to no qualifications at all. Nevertheless, formal, recognised qualifications may be obtained through exclusive participation in specific non-formal education programmes; this often happens when the non-formal programme completes the competencies obtained in another context".

Methodology

For methodological information, please see the Survey of Adult Skills (PIAAC) 2023 – Reader's Companion (OECD, 2024[24]).

The tables in this chapter present only the estimated percentages. The corresponding standard errors are available in the online version of the tables, accessible via the StatLinks provided in the Tables and Notes section. Readers are highly encouraged to consult these online tables, as the precision of the estimates varies, and in some cases, standard errors are relatively large.

Source

Survey of Adult Skills (PIAAC) Cycle 2 (2023).

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Tables and Notes

Chapter A5 Tables

Table A5.1.	Share of adults participating in education and training, by skills proficiency level and educational attainment (2023)
Table A5.2.	Share of adults participating in education and training, by educational attainment and frequency of use of ICT and reading skills in everyday life (2023)
Table A5.3.	Share of adults participating in education and training, by educational attainment and frequency of use of reading and numeracy skills at work (2023)

StatLink https://stat.link/583dnw

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

Data cut-off for the print publication 13 June 2025.

Notes for Tables

Table A5.1. Share of adults participating in education and training, by skills proficiency level and educational attainment (2023)

Note: Does not include adults who were only administered the doorstep interview due to a language barrier. Education and training refers to formal and/or non-formal education and training. Literacy proficiency is reported on a scale of six proficiency levels with below Level 1 being the lowest and Level 5 the highest. Adaptative problem-solving proficiency is reported on a scale of five proficiency levels being Level 4 the highest. This table aggregates below Level 1 and Level 1, and Levels 4 and 5. Columns showing the standard errors, and data on all levels of education and adaptative problem-solving proficiency are available for consultation on line.

Table A5.2. Share of adults participating in education and training, by educational attainment and frequency of use of ICT and reading skills in everyday life (2023)

Note: Does not include adults who were only administered the doorstep interview due to a language barrier. Education and training refers to formal and/or non-formal education and training. Frequency of use reflects how often respondents report performing tasks related to each skill domain. In this table, lowest practice refers to the bottom 20% of respondents on the skill use scale, while highest practice refers to the top 20% (80% and above) of respondents on the scale. Columns showing the standard errors and data on all levels of education are available for consultation on line.

Table A5.3. Share of adults participating in education and training, by educational attainment and frequency of use of reading and numeracy skills at work (2023)

Note: Does not include adults who were only administered the doorstep interview due to a language barrier. Education and training refers to formal and/or non-formal education and training. Frequency of use reflects how often respondents report performing tasks related to each skill domain. In this table, lowest practice refers to the bottom 20% of respondents on the skill use scale, while highest practice refers to the top 20% (80% and above) of respondents on the scale. Columns showing the standard errors and data on all levels of education are available for consultation on line.

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table A5.1. Share of adults participating in education and training, by literacy proficiency level and educational attainment (2023)

Survey of Adult Skills (PIAAC); in per cent; 25-64 year-olds

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	Level 1 or below	Level 2	Level 3	Level 4/5	Level 1 or below	Level 2	Level 3	Level 4/5	Level 1 or below	Level 2	Level 3	Level 4/5
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Austria	8	26	55	c	18	34	44	46	33	52	61	67
Canada	16	32	29	c	31	48	57	59	47	63	74	77
Chile	18	9	c	c	32	45	66	c	51	67	76	86
Czechia	8	22	c	c	22	35	50	62	24	60	64	73
Denmark	16	44	46	c	31	49	62	79	25	69	73	78
Estonia	27	48	53	c	28	45	56	68	35	63	73	80
Finland	11	23	44	c	40	50	68	76	17	64	77	84
France	13	23	25	c	23	33	40	51	31	44	54	66
Germany	14	20	39	c	25	42	50	68	39	55	68	76
Hungary	9	15	c	c	16	23	36	57	31	47	57	62
Ireland	26	36	c	c	38	46	55	77	55	65	76	78
Israel	7	18	22	c	20	31	55	78	33	48	59	67
Italy	6	13	c	c	23	26	36	56	32	50	65	73
Japan	7	18	31	c	20	28	34	42	24	38	46	54
Korea	9	12	c	c	13	13	20	c	17	20	25	30
Latvia	14	26	c	c	21	33	47	58	58	67	70	75
Lithuania	14	21	c	c	16	23	33	c	39	45	62	75
Netherlands	22	35	41	c	34	51	55	68	30	59	71	78
New Zealand	30	30	46	c	43	56	58	75	49	68	80	80
Norway	31	48	50	c	42	55	62	79	64	70	78	77
Poland	10	9	c	c	11	16	25	45	26	40	54	69
Portugal	17	27	29	c	34	42	55	c	39	66	74	82
Slovak Republic	7	12	19	c	21	25	31	38	35	50	59	60
Spain	18	28	34	c	32	44	52	68	44	58	67	74
Sweden	29	37	46	c	40	49	57	72	59	58	69	73
Switzerland	13	35	c	c	28	40	53	61	33	57	68	74
United States	17	33	c	c	35	52	67	72	60	77	83	88
Other economies												
England (UK)	18	28	34	c	39	51	59	67	47	67	73	76
Flemish Region (Belgium)	20	32	46	c	22	42	55	60	22	56	67	74
OECD average	16	26	37	m	28	39	50	64	38	57	66	73
Partner and/or accession countries												
Croatia	5	3	3	c	14	14	14	25	40	47	47	61

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A5.2. Share of adults participating in education and training, by educational attainment and frequency of use of ICT and reading skills in everyday life (2023)

Survey of Adult Skills (PIAAC); in per cent; 25-64 year-olds

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	ICT skills		Reading skills		ICT skills		Reading skills		ICT skills		Reading skills	
	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Austria	10	c	9	43	20	46	17	44	43	64	39	64
Canada	17	30	16	37	31	57	37	56	37	74	50	73
Chile	14	30	13	34	27	47	25	54	47	69	55	71
Czechia	8	c	11	c	26	47	20	48	46	67	39	68
Denmark	18	66	19	49	30	58	25	66	58	79	61	79
Estonia	26	51	27	53	30	62	26	57	52	73	42	79
Finland	10	c	c	c	42	71	38	69	63	86	62	83
France	13	24	8	30	26	38	25	34	46	53	50	54
Germany	14	c	13	35	29	54	23	52	44	73	40	70
Hungary	7	c	10	c	14	44	15	37	34	63	38	59
Ireland	23	44	23	41	36	58	37	54	57	73	35	73
Israel	9	5	6	25	17	42	14	54	38	57	33	61
Italy	5	c	c	c	19	47	c	44	33	71	c	66
Japan	10	c	14	c	24	43	24	42	39	53	36	57
Korea	8	15	9	c	9	21	11	22	17	24	15	28
Latvia	17	29	13	49	19	43	19	43	58	68	55	71
Lithuania	15	c	12	c	10	36	12	40	39	64	39	63
Netherlands	19	37	24	49	31	59	29	64	54	70	42	73
New Zealand	20	39	17	45	49	55	31	61	63	75	44	77
Norway	26	45	c	59	43	66	40	63	72	78	c	79
Poland	9	c	8	c	9	29	6	29	33	40	24	49
Portugal	12	33	12	38	35	46	25	53	56	71	50	76
Slovak Republic	10	c	7	c	19	34	12	34	46	57	25	54
Spain	18	30	17	38	30	49	24	60	36	67	39	71
Sweden	33	48	c	54	46	54	33	66	59	71	c	75
Switzerland	16	52	15	37	31	53	29	53	59	70	58	70
United States	15	33	10	29	27	63	24	62	67	83	60	82
Other economies												
England (UK)	18	30	17	30	32	59	43	58	48	75	53	72
Flemish Region (Belgium)	23	51	17	56	28	53	26	53	47	73	48	71
OECD average	15	36	14	42	27	49	25	51	48	67	44	68
Partner and/or accession countries												
Croatia	6	c	3	c	5	29	6	39	31	57	26	62

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table A5.3. Share of adults participating in education and training, by educational attainment and frequency of use of reading and numeracy skills at work (2023)

Survey of Adult Skills (PIAAC); in per cent; 25-64 year-olds

	Below upper secondary				Upper secondary or post-secondary non-tertiary				Tertiary			
	Reading skills		Numeracy skills		Reading skills		Numeracy skills		Reading skills		Numeracy skills	
	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice	Lowest practice	Highest practice
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Austria	9	c	11	c	21	53	25	45	29	67	54	65
Canada	19	c	31	45	34	71	49	60	49	79	62	77
Chile	12	c	17	21	24	55	32	49	46	73	63	74
Czechia	11	c	22	c	23	66	30	57	61	77	64	79
Denmark	27	c	32	47	43	71	56	58	34	80	71	81
Estonia	34	c	37	55	30	68	37	62	38	81	68	74
Finland	c	c	c	c	46	73	58	78	c	82	75	82
France	22	c	23	51	26	44	32	40	38	62	44	56
Germany	11	c	10	c	22	63	35	59	43	73	56	69
Hungary	12	c	11	c	15	51	18	44	33	60	46	60
Ireland	43	c	54	c	40	62	46	64	68	78	68	79
Israel	11	c	14	15	24	50	31	45	31	63	48	54
Italy	8	c	c	c	25	47	27	48	c	67	51	64
Japan	5	c	12	c	15	56	21	50	22	64	39	61
Korea	8	c	13	c	13	19	12	18	16	26	22	24
Latvia	20	c	13	47	20	61	22	42	48	77	71	70
Lithuania	14	c	22	c	12	42	23	44	23	66	49	61
Netherlands	22	56	21	61	40	65	45	61	c	76	60	71
New Zealand	20	66	14	70	30	70	58	73	39	81	63	76
Norway	c	c	44	c	46	74	59	68	66	81	75	79
Poland	13	c	12	c	13	26	13	22	27	50	35	46
Portugal	17	43	14	42	26	61	30	57	54	77	59	78
Slovak Republic	11	c	6	c	19	38	19	35	41	58	48	59
Spain	19	44	22	39	39	60	42	61	52	73	59	72
Sweden	30	c	41	c	45	66	57	64	41	72	60	69
Switzerland	13	c	17	c	26	55	40	52	44	72	62	70
United States	26	c	18	43	33	75	44	68	74	90	77	87
Other economies												
England (UK)	20	c	25	22	31	67	53	62	37	80	66	77
Flemish Region (Belgium)	24	c	30	c	26	62	34	62	57	74	59	71
OECD average	18	m	22	m	28	58	36	53	43	71	58	68
Partner and/or accession countries												
Croatia	5	c	9	c	7	33	12	29	23	54	44	56

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Chapter A6. How are social outcomes related to education?

Highlights

- Tertiary-educated adults (25-64 year-olds) report better self-perceived health than those with lower levels of attainment. On average, 51% of tertiary-educated adults rated their health as very good or excellent, compared to just 26% of those with below upper secondary education.
- Smoking prevalence varies significantly by country, educational attainment and age. Individuals with lower levels of education tend to smoke more frequently than their tertiary-educated counterparts, reflecting persistent socio-economic disparities in health behaviours. On average about 11% of tertiary-educated adults smoke every day, compared to about 38% of those with below upper secondary education.
- In general, tertiary-educated adults are most likely to report enjoying life but the difference between them and adults with upper secondary attainment is very small. It is larger between adults with below upper secondary education and tertiary education: 61% of adults with below upper secondary attainment report enjoying life all or most of the time compared to about 74% of those with tertiary attainment.

Context

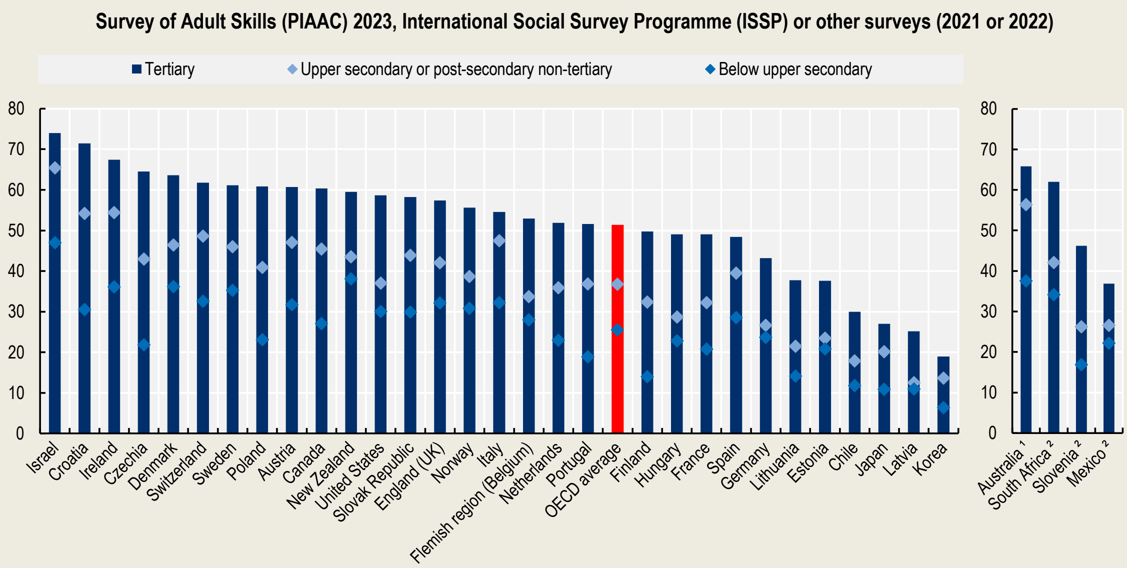
Health is not simply a means of economic participation but a cornerstone of human well-being. Good health enables individuals to thrive, pursue personal goals and engage fully with family and community, thus fostering psychological resilience and social inclusion (Arslan, 2021[1]). Students with good physical and mental health are more engaged with their education and more likely to pursue it, underpinning their long-term skill development and employability (Kharroubi et al., 2024[2]). Incorporating health metrics into international education indicators provides a more comprehensive framework for tracking learning environments and targeting interventions that bridge education and labour-market outcomes.

After they complete compulsory education, health status can have a strong bearing on individuals' participation in the labour market and their earning potential (Jusot, Or and Sirven, 2012[3]). Poor physical or mental health can impair people's ability to engage in work or education, thereby limiting opportunities for skill development. High-skilled occupations – ranging from managerial roles to specialised professions in sectors such as health care, education and information and communications technology (ICT) (OECD, 2024[4]) – are generally less physically demanding, and these positions are more frequently held by individuals with higher incomes who typically have better access to healthcare services (Aggarwal et al., 2011[5]). Conversely, those in lower-skilled roles are more frequently exposed to physically demanding tasks and associated health risks, which may further compound existing inequalities (ILO, 2021[6]). Individuals with lower educational attainment are more likely to face mental health challenges due to greater exposure to stressors and limited access to treatment and support resources. These disadvantages can create a negative feedback loop, where poor mental health undermines academic engagement, further reinforcing socio-economic and educational disparities.

Mental health plays a critical role in labour-market outcomes, with mental illness negatively affecting employment rates, labour-force participation and job retention. Individuals experiencing mental health issues are more likely to work fewer weeks per year and have higher rates of absenteeism (OECD, 2021[7]). Moreover, mental illness significantly limits workforce participation and occupational progression (OECD, 2021[7]). The effects of poor mental health on labour-market engagement are particularly pronounced among women and older adults (OECD, 2021[8]). This chapter explores the relationship between education and a number of key health indicators.

Figure A6.1. Share of adults who reported being in excellent or very good health in the previous week (2021 or 2023)

In per cent; 25-64 year-olds



1. Source is the Australia's National Health Survey (2022).
2. Source is the International Social Survey Programme for South Africa, Slovenia and Mexico.
For data, see Table A6.1 For a link to download the data, see Tables and Notes section.

Other findings

- Higher educational attainment is linked to more positive mental health outcomes when considering depressive symptoms. On average, tertiary-educated individuals report more favourable indicators of mental well-being on this measure than those with lower attainment.
- In Sweden and Poland, adults with below upper secondary education have the highest reported levels of life enjoyment, indicating that other factors beyond education can play major roles in affecting average levels of mental well-being.
- The link between higher educational attainment and lower rates of smoking among 25-64 year-olds is also reflected in the young adult population (18-24 year-olds), though data related to tertiary attainment in this age group should be interpreted with caution as many will still be completing their education.

Note

Care should be taken when interpreting results from different survey sources, as differences in data collection methods and reference periods can affect comparability. This is especially important when examining data on individuals' mental health status (Table A6.3 and Figure A6.3) where the timing and geographical coverage of data collection may influence the outcomes reported.

In Table A6.2, the data on smoking frequency from most sources refer specifically to tobacco smoking, but data from the EU Statistics on Income and Living Conditions (EU-SILC) include the use of electronic cigarettes (vapes).

Analysis

Educational attainment affects health (both physical and mental) in a multitude of ways. Individuals with higher levels of educational attainment are more likely to be well informed about the implications of their choices on their health and therefore have more positive health-related behaviour, probably due to greater access to health education or increased health literacy (Murakami, Kuriyama and Hashimoto, 2023[9]). Those with higher levels of education are also more likely to work in knowledge-intensive occupations, which are generally less physically demanding. These roles can reduce the risk of work-related injuries and may support mental health through providing intellectually stimulating environments (Ford and Wiggins, 2012[10]). The combined effects of these two factors may protect more highly educated adults from some of the negative health impacts experienced by those with lower educational attainment but they may still face other health-related issues, such as sedentary behaviour, high stress levels or long working hours (Waters et al., 2016[11]).

Higher educational attainment is also often linked to greater earning potential (see Chapter A4), which may enable better access to healthcare services, including preventive care and specialised treatment (Jusot, Or and Sirven, 2012[3]). Research indicates that this higher earning potential also facilitates access to improved nutrition, as individuals can afford higher-quality food, which is often more costly (Aggarwal et al., 2011[5]).

In addition to these tangible benefits, higher income is associated with improved subjective wellbeing and mental health, particularly at lower to moderate income levels where material security plays a crucial role in meeting basic needs (OECD, 2023[12]). Moreover, perceptions of financial security relative to one's peers–social comparison–can influence mental wellbeing, highlighting that it is not only absolute income but also relative standing that shapes psychological outcomes (OECD, 2009[13]).

Conversely, individuals with lower educational attainment may face barriers to accessing health care and nutritious food, which can exacerbate health disparities. The link between educational attainment and nutrition-related health is well researched. One study in Brazil finding that neighbourhoods classified as food deserts – areas with limited or no access to food retailers – have lower per capita incomes and a smaller mean number of literate individuals (Honório et al., 2021[14]). Wider access to health care and improved food quality would help bridge the health gap between individuals with different educational backgrounds, promoting better outcomes across the population. Addressing these disparities is essential for enhancing public health and ensuring that all individuals have the opportunity to achieve optimal health, regardless of their educational status (WHO, 2010[15]).

Self-rated health status and educational attainment

Self-reported health offers a proxy for assessing both physical and mental health. It also reflects individuals' awareness of their own health status. Considering that self-reported health is influenced by factors such as education, income and working conditions, it serves as an important tool for identifying health inequalities across socio-economic groups and, in this context, among individuals with different levels of educational attainment (Schram et al., 2021[16]).

Figure A6.1 presents the share of adults (25-64 year-olds) who reported their physical and mental health as "very good" or "excellent" on average across the OECD in the Survey of Adult Skills (PIAAC), based on the question: "In general, would you say your health is excellent, very good, good, fair, or poor?" Data for other countries in the right-hand panel of Figure A6.1 were drawn from the International Social Survey Programme (ISSP), or other sources using comparable questions.

The results indicate that, on average across the OECD countries and economies participating in the Survey of Adult Skills, tertiary-educated adults have the most positive perception of their health (both physical and mental), with about 51% reporting excellent or very good health, followed by those with upper secondary or post-secondary non-tertiary educational attainment (37%). In contrast, only about 26% of adults with below upper secondary education report having very good or excellent health. The countries with the highest shares reporting very good or excellent health among this group were Israel (47%), Australia and New Zealand (38%), and Denmark and Ireland (36%). The lowest shares are in Korea (6%), Japan and Latvia (11%) and Chile (12%) (Figure A6.1).

It is important to note the slight difference in the relationship between educational attainment and (self)-reported physical and mental health between Figure A6.1 and that shown in Figure A6.3, which asks adults about their enjoyment of life. Figure A6.1 shows a clear gradient: the higher the level of educational attainment, the greater the share of individuals reporting excellent or very good health. The pattern in Figure A6.3 is more nuanced, with several countries where tertiary-educated adults do not report the highest levels of enjoyment in some cases, those with the lowest educational attainment report greater life enjoyment.

Health behaviours and educational attainment among adults

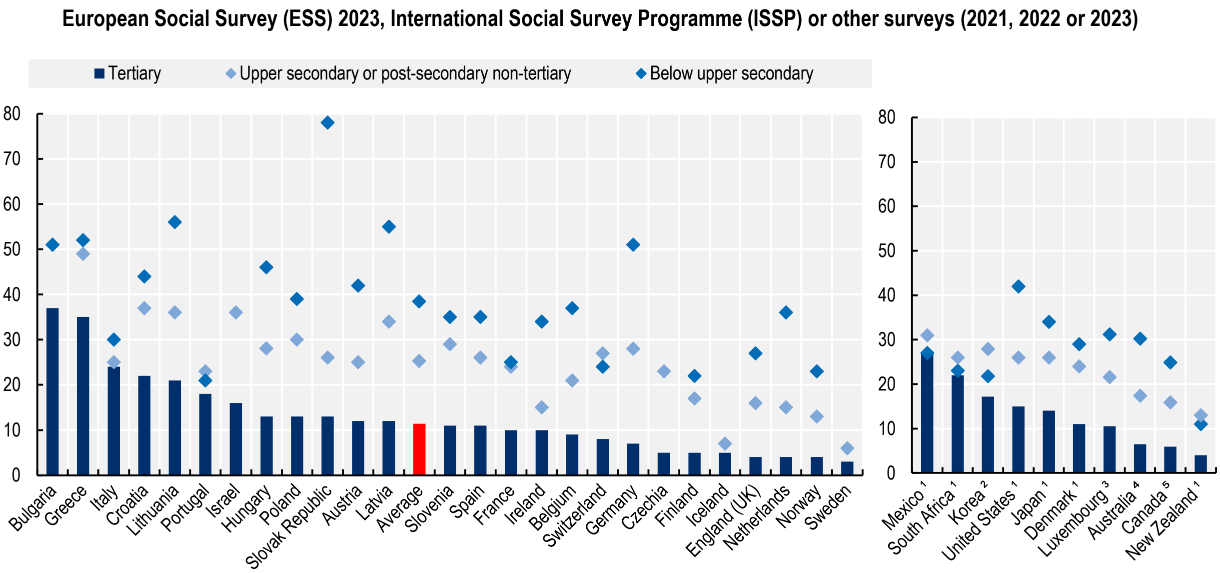
Health behaviours play a crucial role in determining an individual's overall health status, as they reflect both awareness of healthy habits and the ability to maintain a healthy lifestyle.

Tobacco and alcohol are major risk factors for at least two of the leading causes of premature mortality – cardiovascular diseases and cancer. Furthermore, research done under the Global Burden of Disease study has found smoking and tobacco use to be strongly associated with eight negative health outcomes including lung cancer, laryngeal cancer and diseases of the arteries (Dai et al., 2022[17]). Over the past decade, daily smoking rates among adults have fallen considerably in most OECD countries, with the exception of Luxembourg, the Slovak Republic and the Republic of Türkiye (OECD, 2024[4]). This decline may be due to the spread of tobacco control policies, although smoking may still be culturally embedded in many countries (OECD, 2023[18]).

Figure A6.2 presents the share of daily smokers among adults across countries and economies, broken down by educational attainment. It excludes those who vape, except in Luxembourg, whose survey also covers adults who use electronic cigarettes. Smoking prevalence decreases as educational attainment increases. Among OECD countries and economies with data from the European Social Survey (ESS), about 38% of 25-64 year-olds with below upper secondary education are daily smokers on average, compared with about 25% for those with upper secondary or post-secondary non-tertiary education and about 11% for those with tertiary education.

Figure A6.2. Share of adults who smoke every day, by educational attainment (2021, 2022 or 2023)

In per cent; 25-64 year-olds



Note: The average includes only countries participating in the 2023 European Social Survey, not all OECD countries.
1. Source is the International Social Survey Programme (ISSP) for Mexico, South Africa, the United States, Japan, Denmark and New Zealand.
2. Korea Welfare Panel Study Survey (2023).
3. Source is the EU Statistics on Income and Living Conditions (EU-SILC) (2022).
4. Source is the Australia's National Health Survey (2022).
5. Source is the Canadian Community Health Survey (CCHS) (2023).
For data, see Table A6.2. For a link to download the data, see Tables and Notes section.

Although the overall average across OECD countries is low, there is wide cross-country variation in the share of adults smoking every day. Among countries with ESS data, Bulgaria has the highest share of daily smokers among tertiary-educated adults, at 37%, while Sweden has the lowest (3%), followed by England, the Netherlands, and Norway (4%). Among countries with ISSP data, the share of daily smokers ranges from 4% of tertiary-educated adults in New Zealand, to 27% in Mexico. For each data source, smoking rates fall as educational attainment increases in most countries, but not all (Figure A6.2).

There is a parallel trend with educational attainment evident among individuals who have never smoked, with the share of those who report having never smoked increasing as educational attainment increases. About 34% of 25-64 year-olds with below upper secondary education report never having smoked, compared to about 39% of those with upper secondary or post-secondary non-tertiary education and about 50% of those with tertiary education (Table A6.2).

Bulgaria (29%) and Greece (34%) have the highest shares of young adults (18-24 year-olds) with upper secondary or post-secondary non-tertiary attainment who smoke daily. Among young adults with below upper secondary educational attainment, the highest share of daily smokers can be found in Hungary(45%) and the lowest share in Czechia (5%) (Table A6.2).

Data for tertiary-educated 18-24 year-olds are harder to interpret due to small sample sizes and the fact that some of this age group may be actively pursuing a tertiary degree despite not having yet attained one (Table A6.2).

These patterns highlight the relationship between smoking and educational attainment, suggesting that higher levels of education may be associated with greater awareness of the health risks of smoking and greater adherence to healthier lifestyles.

Mental health and educational attainment

Since the COVID-19 pandemic, mental health has garnered significant attention in OECD countries, emerging as a crucial topic for policy development. The lockdowns implemented during the pandemic had a negative impact on mental health, leading to increased rates of anxiety, depression and other mental health disorders (OECD, 2021[8]).

Previous OECD work on mental health has drawn on the widely recognised definition provided by the World Health Organization (WHO), which defines mental health as "a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community" (OECD, 2023[19]).

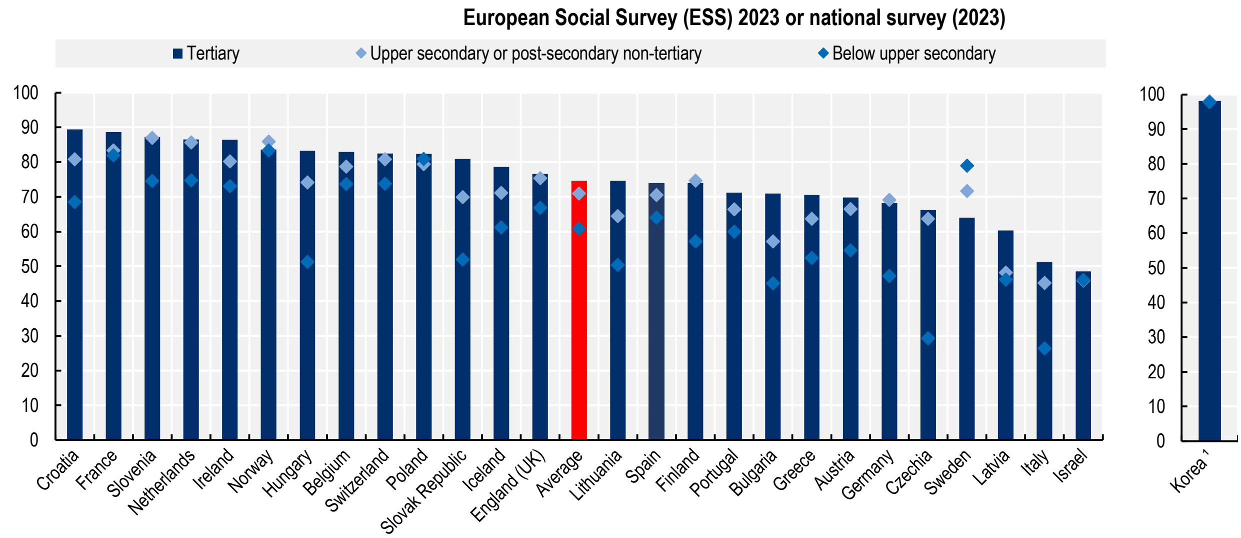
Despite increasing recognition of its importance, mental health care remains excluded from universal public healthcare provision in many OECD countries, exacerbating disparities by socio-economic status and by gender, as women report higher rates of anxiety and depression (OECD, 2021[8]). Individuals earning lower incomes also face barriers to care, as out-of-pocket costs make therapy unaffordable when not covered by insurance (Reiss et al., 2021[20]). The stigma surrounding mental health also remains a barrier to seeking help for many. In some countries, there is a belief that discussing mental health issues or visiting a therapist is a sign of weakness, which can deter individuals from pursuing the care they need (Corrigan, 2004[21]). As a result, individuals struggling with mental illness face even greater challenges in accessing education and participating fully in the labour market, further compounding the barriers to their social and economic inclusion.

The relationship between educational attainment and mental health outcomes is well established. Research indicates that individuals with lower educational levels are more likely to experience mental health challenges and have less access to effective treatment options (Demange et al., 2023[22]; Silverman and Teachman, 2022[23]). Sociological perspectives, such as Pearlin's stress process model, highlight that stressors contributing to mental health challenges are not randomly distributed but are shaped by social and economic conditions (Pearlin, 1989[24]). Individuals with lower educational attainment or in lower socio-economic strata often face more frequent and severe stressors, while also having fewer personal and social resources to cushion their impact. These unequal distributions contribute to persistent disparities, affecting both the motivation and the willingness to pursue education, and creating a negative feedback loop in the relationship between mental health and academic engagement (Brännlund, Strandh and Nilsson, 2017[25]).

Figure A6.3 illustrates the share of adults who reported that they enjoyed life during the past week, using data from the ESS, based on the CES-D 8 scale, which is used to assess depressive symptoms (see *Definitions* section). The CES-D 8 is a standardised, internationally comparable scale with strong reliability (OECD, 2023[19]).

Figure A6.3. Share of adults who reported enjoying life during the past week, by educational attainment (2023)

In per cent; 25-64 year-olds; enjoyed life all the time, almost all the time or most of the time



Note: The average includes only countries participating in the 2023 European Social Survey, not all OECD countries.
1. Korea Welfare Panel Study Survey (2023).
For data, see Table A6.3. For a link to download the data, see Tables and Notes section.

Among countries and economies with ESS data available, tertiary-educated 25-64 year-olds generally reported the highest rates of life enjoyment, with 75% on average reporting that they enjoyed life almost all or most of the time. This share decreases with lower educational attainment, with 71% of those holding an upper secondary qualification and 61% of those with below upper secondary education reporting that they enjoyed life almost all or most of the time (Table A6.3).

In many countries, higher educational attainment does not correlate with greater life enjoyment. For instance, in Sweden, only 64% of tertiary-educated adults reported enjoying life, compared to 84% of those with below upper secondary attainment and 79% of those with upper secondary or post-secondary non-tertiary education. These low relative levels of enjoyment among those with tertiary education could be in part due to high levels of workplace stress and job involvement (Azila-Gbettor, Atsu and Quarshie, 2022[26]) (Figure A6.3 and Table A6.3).

These results may reflect the multifaceted context-dependent nature of subjective health. Although higher levels of education are often associated with better physical and mental health outcomes – linked to higher income, improved access to health care and healthier lifestyles choices – the enjoyment of life is influenced by a broader range of social, cultural and psychological factors (Aggarwal et al., 2011[5]; Jusot, Or and Sirven, 2012[3]). For instance, individuals with lower educational attainment may benefit from stronger local social networks and greater reliance on community support, protective factors that can foster a greater sense of belonging and emotional stability. Life satisfaction is also influenced by personal expectations and cultural norms, which can vary widely across socio-economic groups. In some settings, lower educational groups may adopt more pragmatic or community-oriented definitions of success and happiness, which may contribute positively to their sense of enjoyment (Maass et al., 2016[27]; Inaba et al., 2015[28]). Thus, although education often enhances material well-being and health, its relationship with subjective life enjoyment is more complex and not necessarily linear.

Data from the ISSP provide insights into the share of individuals who reported feeling depressed in the past four weeks, by educational attainment. Among those with below upper secondary education, the highest rate was reported in Korea (27%), while the lowest was observed in South Africa (4%). For individuals with upper secondary or post-secondary non-tertiary education, Korea reported the highest rate (21%) and Mexico the lowest (3%). Among tertiary-educated individuals, rates were generally lower, ranging from 17% in Korea to just 1% in the United States. These data are consistent with those from ESS, which consistently found higher rates of adults reporting feeling depressed among those with below upper secondary education than those with tertiary educational attainment (Table A6.3).

Definitions

Age group: Although there is explicit reference to 18-24 year-olds throughout this chapter, the term **adult** is used only in reference to 25-64 year-olds.

Educational attainment refers to the highest level of education successfully completed by an individual.

Levels of education: See the *Reader's Guide* at the beginning of this publication for a presentation of all ISCED 2011 levels.

Mental health enables individuals to manage life's challenges, realise their potential, perform effectively in learning and work, and contribute to their communities. It is an essential component of overall health, supporting both individual and collective capacities to make decisions, form relationships and shape the world around us (WHO, 2022[29]).

Self-rated health refers to an individual's own assessment of their health status, typically expressed through a survey or questionnaire. It is usually rated on a scale (e.g. from "excellent" to "poor") and reflects the person's perception of their physical and mental health.

The CES-D-8 is an eight-item version of the Centre for Epidemiologic Studies (CES) scale for assessing depressive symptoms. The scale is used to measure the frequency and severity of depressive feelings. Respondents of the scale were asked to indicate how often in the week previous to the survey they felt or behaved: felt depressed, felt that everything was an effort, slept poorly, felt lonely, felt sad, could not get going, enjoyed life, felt happy. Respondents chose their response from a 4 Likert scale ranging from "none" or "almost none of the time" to "all" or "almost all of the time". Scale scores are assessed using a non-weighted summed ranging from 0 to 24, the higher scores indicating a higher frequency and severity of depressive symptoms. Table A6.3 provides the remaining items from the scale.

Methodology

Different questions were asked to survey respondents, depending on the data source:

Table A6.1.

1. Survey of Adult Skills (PIAAC) (2023) question: "*In general, how would you rate your health: excellent, very good, good, fair, or poor?"*
2. International Social Survey Programme (ISSP) (2021) question: "*In general, would you say your health is: excellent, very good, good, fair, poor, can't choose*".
3. EU Statistics on Income and Living Conditions (EU-SILC) (2024) question*: "How is your health in general? Is it… very good, good, fair, bad, very bad".*

Table A6.2.

1. European Social Survey (ESS) Round 11 (2023) question: "*Now thinking about smoking cigarettes. Which of the descriptions on this card best describes your smoking behaviour?"* The interviewer gave different options.
2. International Social Survey Programme (ISSP) (2021) question: "*Do you smoke cigarettes, and if so, about how many cigarettes a day?*" The interviewer gave different options.
3. EU Statistics on Income and Living Conditions (EU-SILC) (2022) question*:* "*In the last 12 months, did you use tobacco (including water pipes, heated tobacco, chewing tobacco, etc.) or any other related products*

(electronic cigarettes with or without nicotine, nicotine pouches, etc.)?" Response categories include "Yes, daily; Yes, a few times a week; Yes, a few times a month; Yes, a few times a year; Not at all".

Table A6.3.

1. European Social Survey (ESS) Round 11 (2023) question: "*How much of the time during the past week did you feel this way…You felt depressed?, You could not get going?, You enjoyed life?, You felt that everything you did was an effort?, You were happy?, You felt lonely?, You felt sad?, Your sleep was restless?".* Respondents could choose from the following options: "None or almost none of the time", "Some of the time", "Most of the time", "All or almost all the time".
2. International Social Survey Programme (ISSP) (2021) question: "*During the past 4 weeks how often… have you felt unhappy and depressed?*". Respondents could choose from the following options: "very often", "often", "sometimes", "seldom", "never", "can't choose".

Source

- Australia's National Health Survey (2022) – **Tables A6.1 and A6.2.**
- Canadian Community Health Survey (CCHS) (2023) – **Tables A6.2 and A6.3.**
- Canadian Social Survey (CSS) (2023) – **Table A6.3.**
- European Social Survey (ESS) round 11 (2023) – **Tables A6.2 and A6.3.**
- EU Statistics on Income and Living Conditions (EU-SILC) (2024) – **Table A6.1.**
- EU Statistics on Income and Living Conditions (EU-SILC) (2022) – **Table A6.2.**
- International Social Survey Programme (ISSP) (2021) – **Tables A6.1, A6.2 and A6.3.**
- Korea Welfare Panel Study Survey (2023) conducted by Korea institute for Health and Social Affairs (KIHASA) – **Table A6.2.**
- Survey of Adult Skills (PIAAC) Cycle 2 (2023) – **Table A6.1.**

For more information, please refer to *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

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Tables and Notes

Chapter A6 Tables

Table A6.1	Self-reported health status, by educational attainment (2021, 2022, 2023 or 2024)
Table A6.2	Self-reported smoking status, by educational attainment and age group (2021, 2022 or 2023)
Table A6.3	Share of adults who responded "all or almost all the time" or "most of the time" to items assessing their mental health during the past week, by educational attainment (2021 or 2023)

StatLink https://stat.link/m6ny83

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

Data cut-off for the print publication 13 June 2025.

Notes for Tables

Table A6.1. Self-reported health status, by educational attainment (2021, 2022, 2023 or 2024)

Note: The question in the Survey of Adult Skills (PIAAC) is: "The next question is about your health. Overall, would you say your health is excellent, very good, good, fair, or poor? By health, we mean both physical and mental health". Does not include adults who were only administered the doorstep interview due to a language barrier.

The question in the International Social Survey Programme (ISSP) is: "In general, would you say your health is: excellent, very good, good, fair, poor, can't choose".

The question in EU-SILC is: "How is your health in general? Is it… very good, good, fair, bad, very bad".
Columns showing the standard errors, the categories very good and excellent together, and those showing data for All levels of education are available for consultation on line.

1. Source is the Australia's National Health Survey (2022). S.E. refers to the relative standard errors.
2. Source is the EU Statistics on Income and Living Conditions (EU-SILC) (2024).

Table A6.2. Self-reported smoking status, by educational attainment and age group (2021, 2022 or 2023)

Note: The question in the International Social Survey Programme (ISSP) is: "Do you smoke cigarettes, and if so about how many cigarettes a day?" with response options as follows: Do not smoke and never did; Do not smoke now but smoked in the past; Smoke 1–5 cigarettes per day; Smoke 6–10 cigarettes per day; Smoke 11–20 cigarettes per day; Smoke 21–40 cigarettes per day; Smoke more than 40 cigarettes per day; Can't choose.
The question in EU-SILC is: "In the last 12 months, did you use tobacco (including water pipes, heated tobacco, chewing tobacco, etc.) or any other related products (electronic cigarettes with or without nicotine, nicotine pouches, etc.)?" Response categories include: Yes, daily; Yes, a few times a week; Yes, a few times a month; Yes, a few times a year; Not at all.
Columns showing data for 18-24 year-olds and for all levels of education are available for consultation on line. ESS website last consultation: June, 2nd 2025.

1. Source is the Australia's National Health Survey (2022).
2. Source is the Canadian Community Health Survey (CCHS) (2023).
3. Source is the Korea Welfare Panel Study Survey (2023).
4. Source is the EU Statistics on Income and Living Conditions (EU-SILC) (2022).

Table A6.3. Share of adults who responded "all or almost all the time" or "most of the time" to items assessing their mental health during the past week, by educational attainment (2021 or 2023)

Note: The question in the International Social Survey (ISSP) is: "During the past 4 weeks how often. have you felt unhappy and depressed?" The shares show the individuals who responded "very often".
Columns showing data for "Could not get going", "Felt everything is an effort", and "Felt sad", and for all levels of education are available for consultation on line. ESS website last consultation: June, 2nd 2025.

1. Source is the Canadian Community Health Survey (CCHS) and the Canadian Social Survey (CSS) (2023).
2. Source is the Korea Welfare Panel Study Survey (2023).

Control codes

a – category not applicable; **b** – break in series; **c** – there are too few observations to provide reliable estimates; **d** – contains data from another column; **m** – missing data; **r** – values are below a certain reliability threshold and should be interpreted with caution **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* [(https://doi.org/10.1787/fcfaf2d1-en)

Table A6.1. Self-reported health status, by educational attainment (2021, 2022, 2023 or 2024)

In per cent; 25-64 year-olds

	Survey of Adult Skills (PIAAC) (2023)														
	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	Poor	Fair	Good	Very good	Excellent	Poor	Fair	Good	Very good	Excellent	Poor	Fair	Good	Very good	Excellent
OECD countries	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)	(13)	(14)	(15)	(16)	(17)
Austria	10	22	36	24	8	5	16	32	30	17	1	10	28	40	21
Canada	15	19	39	20	7	5	17	33	30	16	2	9	29	40	20
Chile	10	45	33	5	7	4	34	44	11	7	2	20	48	21	9
Czechia	10	30	37	14	7	4	13	40	29	14	1	5	29	44	21
Denmark	13	28	23	25	12	6	20	27	32	14	3	11	23	41	23
Estonia	12	34	32	14	7	8	31	37	16	8	3	19	40	28	10
France	14	28	36	13	7	9	21	38	23	10	3	12	36	32	17
Finland	6	39	41	10	4	4	20	44	24	8	1	11	38	35	14
Germany	14	32	30	17	6	9	24	40	20	6	4	15	38	31	12
Hungary	12	38	27	13	10	6	26	39	17	11	1	13	36	32	17
Ireland	12	19	33	27	9	3	12	31	37	17	2	7	23	44	24
Israel	12	17	24	17	30	5	10	20	25	41	2	6	18	31	43
Italy	4	21	43	24	8	2	12	38	36	12	1	13	32	41	14
Japan	17	37	36	9	2	7	30	42	15	5	6	23	44	21	6
Korea	23	46	25	6	1	11	46	29	11	3	6	37	37	15	4
Lithuania	16	43	27	7	7	8	35	35	12	10	3	20	39	26	12
Latvia	14	43	32	7	4	9	41	38	10	2	2	22	51	20	5
Netherlands	8	28	42	15	8	5	18	42	21	14	3	12	34	31	21
New Zealand	14	19	29	27	11	5	18	34	29	14	3	10	28	36	24
Norway	15	26	29	21	10	8	17	36	29	9	4	10	31	38	17
Poland	8	21	48	20	3	2	10	47	35	6	0	3	36	50	11
Portugal	11	38	32	12	7	4	19	40	24	13	2	13	33	36	15
Slovak Republic	8	22	41	21	9	3	13	41	33	11	1	9	32	41	17
Spain	8	24	39	20	9	4	16	40	28	12	3	14	35	36	12
Sweden	8	29	28	24	12	7	15	32	31	15	2	10	27	40	21
Switzerland	7	21	39	26	7	3	12	36	35	13	1	7	30	41	20
United States	7	30	33	19	11	6	22	35	26	11	3	11	28	38	21
Other economies															
England (UK)	18	22	28	22	10	8	18	32	28	14	4	11	28	37	20
Flemish Region (Belgium)	10	20	42	21	7	4	20	42	25	9	3	11	34	36	17
OECD average	12	29	34	17	8	6	21	37	25	12	2	13	33	35	17
Partner and/or accession countries															
Croatia	11	23	36	19	11	4	11	30	33	21	1	7	20	42	30

	International Social Survey Programme (ISSP) (2021) or other surveys (2022 or 2024)														
	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	Poor	Fair	Good	Very good	Excellent	Poor	Fair	Good	Very good	Excellent	Poor	Fair	Good	Very good	Excellent
OECD countries	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)	(13)	(14)	(15)	(16)	(17)
Australia[1]	28	x(1)	35	25	13	13	x(7)	31	38	18	9	x(13)	25	41	25
Luxembourg[2]	16	40	37	7	m	7	22	58	13	a	2	14	57	27	m
Mexico	8	41	29	13	10	1	30	42	20	7	1	18	44	32	5
Slovenia	14	21	49	2	15	5	26	43	22	5	1	9	44	37	10
Partner and/or accession countries															
South Africa	5	24	36	23	12	3	15	41	28	14	1	4	32	31	31

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table A6.2. Self-reported smoking status, by educational attainment and age group (2021, 2022 or 2023)

In per cent

	European Social Survey (ESS) (2023)														
	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	Daily	Frequently	Used to smoke, but not anymore	Have smoked a few times	Have never smoked	Daily	Frequently	Used to smoke, but not anymore	Have smoked a few times	Have never smoked	Daily	Frequently	Used to smoke, but not anymore	Have smoked a few times	Have never smoked
OECD countries	(6)	(7)	(8)	(9)	(10)	(16)	(17)	(18)	(19)	(20)	(26)	(27)	(28)	(29)	(30)
Austria	42	2	11	3	42	25	3	26	9	36	12	7	21	5	54
Belgium	37	8	23	6	26	21	4	21	11	42	9	3	18	16	53
Czechia	c	c	c	c	c	23	5	22	9	41	5	4	19	17	55
Finland	22	0	44	8	25	17	8	36	17	23	5	4	27	24	40
France	25	3	26	7	39	24	3	33	6	35	10	4	23	14	49
Germany	51	4	12	7	26	28	5	24	10	34	7	6	21	18	48
Greece	52	1	14	5	28	49	3	14	6	28	35	3	17	5	40
Hungary	46	5	6	3	39	28	3	10	7	52	13	4	14	8	62
Iceland	c	c	c	c	c	7	2	42	13	36	5	1	28	19	46
Ireland	34	1	17	4	44	15	3	22	4	56	10	3	19	8	59
Israel	c	c	c	c	c	36	3	10	2	49	16	4	10	6	64
Italy	30	4	16	9	41	25	4	17	9	44	24	5	13	10	48
Latvia	55	0	6	4	34	34	6	24	6	29	12	10	24	13	41
Lithuania	56	6	8	13	17	36	9	14	16	25	21	9	22	22	26
Netherlands	36	7	25	7	25	15	4	32	9	39	4	5	27	17	47
Norway	23	3	40	10	23	13	3	34	15	35	4	3	27	22	45
Poland	39	1	30	6	24	30	4	23	8	36	13	4	19	12	52
Portugal	21	1	13	1	64	23	1	12	2	62	18	2	16	5	59
Slovak Republic	78	5	5	0	12	26	7	18	7	41	13	5	18	10	55
Slovenia	35	4	21	7	33	29	5	19	9	38	11	7	15	11	57
Spain	35	3	27	3	32	26	4	21	6	43	11	4	24	10	52
Sweden	c	c	c	c	c	6	2	37	22	33	3	2	25	34	35
Switzerland	24	8	14	6	49	27	6	20	10	38	8	7	18	18	49
Other economies															
England (UK)	27	3	19	3	48	16	3	26	6	48	4	4	22	14	56
Average	38	3	19	6	34	25	4	22	9	39	11	5	20	14	50
Partner and/or accession countries															
Bulgaria	51	4	11	5	28	51	5	16	6	22	37	9	21	6	26
Croatia	44	1	13	7	34	37	3	14	6	40	22	6	16	7	49

	International Social Survey Programme (ISSP) (2021) or other surveys (2022 or 2023)														
	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	Daily	Frequently	Used to smoke, but not anymore	Have smoked a few times	Have never smoked	Daily	Frequently	Used to smoke, but not anymore	Have smoked a few times	Have never smoked	Daily	Frequently	Used to smoke, but not anymore	Have smoked a few times	Have never smoked
OECD countries	(6)	(7)	(8)	(9)	(10)	(16)	(17)	(18)	(19)	(20)	(26)	(27)	(28)	(29)	(30)
Australia[1]	30	x(6)	35	m	35	17	x(16)	32	m	51	7	x(26)	25	m	69
Canada[2]	25	2	29	5	39	16	3	27	8	46	6	3	18	12	62
Denmark	29	m	35	m	36	24	m	32	m	44	11	m	27	m	62
Japan	34	m	49	m	17	26	m	27	m	48	14	m	24	m	62
Korea[3]	22	m	0	m	78	28	m	0	m	72	17	m	0	m	83
Luxembourg[4]	31	4	a	1	65	22	5	a	4	69	11	5	a	4	81
Mexico	27	m	22	m	51	31	m	19	m	51	27	m	16	m	57
New Zealand	11	m	48	m	41	13	m	41	m	46	4	m	14	m	82
United States	42	m	4	m	54	26	m	24	m	50	15	m	21	m	65
Partner and/or accession countries															
South Africa	23	m	4	m	72	26	m	4	m	70	22	m	12	m	66

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table A6.3. Share of adults who responded "all or almost all the time" or "most of the time" to items assessing their mental health during the past week, by educational attainment (2021 or 2023)

In per cent; CES-D 8 scale items assessing individuals' mental health; 25-64 year-olds

	European Social Survey (ESS) (2023)														
	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	Felt depressed	Enjoyed life	Felt happy	Felt lonely	Restless sleep	Felt depressed	Enjoyed life	Felt happy	Felt lonely	Restless sleep	Felt depressed	Enjoyed life	Felt happy	Felt lonely	Restless sleep
OECD countries	(1)	(3)	(5)	(6)	(8)	(9)	(11)	(13)	(14)	(16)	(17)	(19)	(21)	(22)	(24)
Austria	8	55	55	11	20	2	66	75	3	7	4	70	77	5	10
Belgium	11	74	72	11	33	10	79	79	10	28	3	83	86	4	19
Czechia	16	29	56	29	27	12	64	77	8	11	9	66	81	7	6
Finland	3	57	60	3	17	3	75	73	3	13	1	74	73	2	9
France	11	82	78	14	35	6	83	78	7	29	5	89	83	4	18
Germany	17	47	51	12	41	9	69	73	4	27	3	68	78	3	13
Greece	5	52	53	12	6	4	64	59	7	7	3	71	68	6	7
Hungary	21	51	55	10	28	8	74	80	8	16	3	83	85	7	10
Iceland	13	61	68	14	24	8	71	83	3	26	5	79	84	4	18
Ireland	5	73	73	5	14	4	80	81	4	14	1	86	87	3	13
Israel	12	46	42	12	38	16	46	46	12	21	8	49	54	8	17
Italy	6	26	51	11	11	3	45	64	5	6	1	51	72	3	4
Latvia	7	46	42	4	21	11	48	57	8	19	5	60	65	4	13
Lithuania	14	50	51	11	32	9	64	63	8	15	3	75	79	4	9
Netherlands	7	75	77	7	24	2	86	86	2	18	3	87	89	1	17
Norway	7	83	67	3	27	2	86	74	4	13	2	84	72	3	11
Poland	11	81	70	12	22	9	79	77	8	16	7	82	80	6	14
Portugal	15	60	61	14	29	5	66	68	7	20	3	71	73	5	17
Slovak Republic	11	52	55	13	10	5	70	70	7	10	4	81	77	2	7
Slovenia	4	75	73	5	25	3	87	89	3	14	3	87	88	4	14
Spain	9	64	70	8	23	6	70	77	6	21	5	74	82	4	17
Sweden	5	79	68	5	16	5	72	77	5	16	3	64	77	3	14
Switzerland	4	74	80	4	20	6	81	85	4	15	2	82	83	4	15
Other economies															
England (UK)	12	67	65	8	34	8	75	75	7	28	5	77	78	4	18
Average	10	61	62	10	24	7	71	74	6	17	4	75	78	4	13
Partner and/or accession countries															
Bulgaria	9	45	42	9	13	6	57	56	9	12	4	71	68	9	11
Croatia	10	69	80	10	23	5	81	89	4	10	1	89	90	3	9

	International Social Survey Programme (ISSP) (2021) or other surveys (2023)														
	Below upper secondary					Upper secondary or post-secondary non-tertiary					Tertiary				
	Felt depressed	Enjoyed life	Felt happy	Felt lonely	Restless sleep	Felt depressed	Enjoyed life	Felt happy	Felt lonely	Restless sleep	Felt depressed	Enjoyed life	Felt happy	Felt lonely	Restless sleep
OECD countries	(1)	(3)	(5)	(6)	(8)	(9)	(11)	(13)	(14)	(16)	(17)	(19)	(21)	(22)	(24)
Canada[1]	10	m	m	20	21	9	m	m	15	20	6	m	m	11	16
Denmark	11	m	m	m	m	4	m	m	m	m	3	m	m	m	m
Japan	6	m	m	m	m	5	m	m	m	m	5	m	m	m	m
Korea[2]	27	98	99	26	41	21	98	99	17	30	17	98	99	12	27
Mexico	11	m	m	m	m	3	m	m	m	m	3	m	m	m	m
New Zealand	8	m	m	m	m	5	m	m	m	m	4	m	m	m	m
United States	5	m	m	m	m	5	m	m	m	m	1	m	m	m	m
Partner and/or accession countries															
South Africa	4	m	m	m	m	5	m	m	m	m	4	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Part B. Access to education, participation and progression

Chapter B1. How does the provision of and participation in early childhood education and care vary across countries?

Highlights

- Most children aged 3 to 5 (85%) attend early childhood education (ECE) programmes across the OECD, yet only 29% of those aged 0 to 2 are enrolled in ECE programmes on average.
- Participation in ECE has grown over the past decade, with enrolment in ECE programmes increasing by 9 percentage points to 29% among children under 3, and enrolment in ECE programmes for children aged 3 and above rising by 5 percentage points to 85% on average across OECD countries.
- Between 2013 and 2023, many countries experienced plateauing or declining numbers of children under 5, and population projections from 2023 to 2033 suggest the number of young children in most OECD countries will continue to decline.

Context

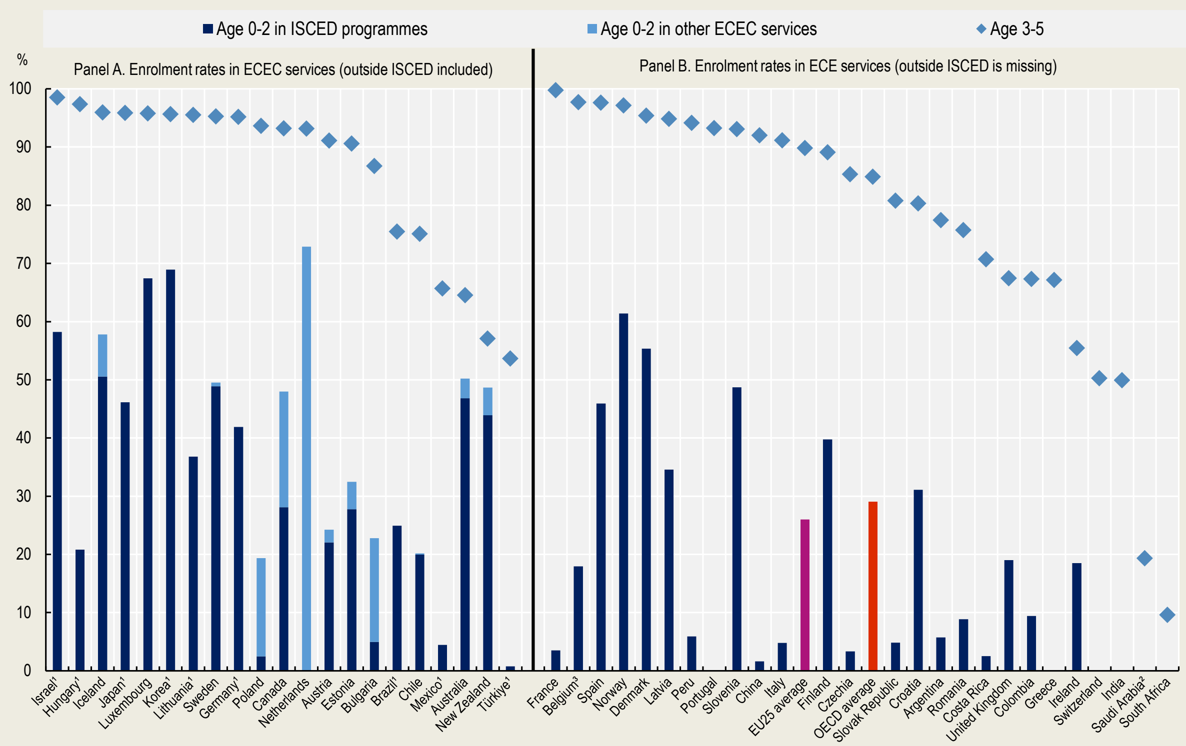
Education in the early years has a crucial role in children's development and well-being. An expanding body of scientific research indicates that early childhood education and care (ECEC) substantially improves children's language, cognitive, social and emotional skills while fostering the self-regulation and confidence they need for a smooth transition into primary school in the short term, particularly for children from low socio-economic backgrounds (Yoshikawa, Weiland and Brooks-Gunn, 2016[1]; Shuey and Kankaraš, 2018[2]; OECD, 2020[3]; OECD, 2021[4]). Furthermore, the progress that children make in their first years can have a lasting impact on their educational attainment, academic performance, well-being and earnings in later life (García et al., 2020[5]; Heckman and Karapakula, 2019[6]).

ECEC services are diverse across countries, reflecting a variety of organisational structures, funding mechanisms and governance models. Provision can occur both inside and outside the formal boundaries of ISCED classifications, depending on national systems. In some countries, ECEC programmes are classified within ISCED 0, while in others, services such as childcare centres or family day care, particularly for children under the age of 3, are not considered part of the education system. The scope and quality assurance mechanisms governing these diverse services can differ significantly, influencing access, enrolment and outcomes (OECD, 2017[7]).

While enrolment rates in ECEC have increased substantially over the past decade in many OECD and partner countries, differences remain, particularly for children under the age of 3. Participation also varies by socio-economic background, with children from disadvantaged families - who stand to benefit the most from participating in early childhood education - being the least likely to attend (OECD, 2025[8]; OECD, 2024[9]). These gaps are often influenced by factors such as availability, affordability, cultural preferences and policy priorities.

Demographic trends among young children also present important challenges for the ECEC sector. In many OECD countries, the declining birth rate has led to a shrinking population of young children, affecting demand for ECEC services (OECD, 2024[10]). While reduced child populations may ease pressures on resources in some contexts, they can also pose financial sustainability challenges for providers and reduce economies of scale. At the same time, demographic change offers opportunities to improve the quality of services by allowing for smaller group sizes and more individualised attention if resources are effectively reallocated.

Figure B1.1. Enrolment rates of children in early childhood education (ISCED 0) and other ECEC services (outside ISCED), by age groups (2023)



Note: Some countries have other registered ECEC services that are considered to be an integral part of their ECEC provision but do not comply with all the ISCED11 level 0 criteria to qualify as educational programmes. Panel A shows the countries which either have enrolment data for these other registered ECEC services or where such programmes do not exist. Panel B shows countries where such programmes exist but they only have enrolment data for ISCED 0 programmes.
1. There are no ECEC services that fall outside ISCED classification.
2. Year of reference differs from 2023.
3. Early childhood education excludes early childhood educational development programmes (ISCED 01).
For data, see Table B1.2. For a link to download the data, see Tables and Notes section.

Other findings

- In 24 OECD and partner countries, there are different programmes for children aged 0 to 2 and those aged 3 to 5, while 16 countries have integrated systems providing a single ECEC framework from birth or age 1 to the start of primary education.

- Enrolment rates for children aged 0 to 2 vary greatly across OECD countries, with over 60% participation in Korea, Luxembourg, the Netherlands and Norway, and less than 5% in Mexico and the Republic of Türkiye, though rates rise notably as children age.
- The largest increases in enrolment for children aged 3 to 5 over the past decade occurred in Costa Rica, Croatia, Poland and Türkiye, where rates grew by over 20 percentage points, driven by policies such as expanded compulsory pre-primary education and guaranteed access to ECEC services.
- Over the next decade, countries such as Argentina, Greece, Italy, Japan and Korea are expected to see a slowing in the decline in the numbers of young children, while Eastern European countries like Bulgaria, Poland and the Slovak Republic may face declines of over 15% due to low fertility and emigration. In contrast, Israel's young population is projected to grow by 15%, reflecting high fertility rates.

Note

This chapter only covers formal education and care. Informal care services (generally unregulated care arranged by the child's parents either in the child's home or elsewhere, provided by relatives, friends, neighbours, babysitters or nannies) are not covered (see *Definitions* section for more details). In some countries, children under the age of 3 are also likely to be enrolled in other registered ECEC services which do not meet ISCED 2011 criteria. The enrolment rates of those children should be interpreted with caution, given the limited availability of data for these services. As a result, the analysis of this chapter concentrates on the children at the age of 3 and above at pre-primary level where data are more available and comparable.

Analysis

Differences in the structure of ECEC systems

In light of the numerous benefits associated with participation in early childhood education and care (ECEC), all OECD countries acknowledge the need to develop high-quality ECEC programmes. Yet, there is notable variation in how ECEC systems are structured, the types of services offered, and the broader parental leave, social and family policies designed to promote participation.

A key distinction at the system level lies in the governance and organisation of ECEC services, specifically, whether they are administered through a split or integrated system. In split systems, separate ECEC services are provided for younger and older children, often dividing the group at the age of 3, prior to primary education. In contrast, integrated systems offer a continuous approach to ECEC across the entire 0-5 or 0-6 age range, under a unified framework leading up to primary school.

Split systems are used by 24 OECD and partner countries, with distinct programmes for 0-2 year-olds and 3-5 year-olds. This distinction is not solely for international reporting purposes, but reflects national ECEC frameworks. For instance, Spain organises early childhood education into two cycles: the first one covers age 0 to 3 and the second, age 3 to 6. In many of these countries, it is common for different ministries or authorities to oversee services for different age groups. Typically, services for the older group fall under the regulations of countries' ministries of education, while those for younger children are managed by other bodies, such as health or social welfare ministries. In many cases, they are offered in different institutions and the required qualifications for teachers are different.

In contrast, 16 OECD and partner countries have adopted integrated systems, offering a single ECEC framework from birth or the age of 1 to the start of primary education. For instance, in Estonia and Latvia, there is a single ECE programme for children aged from 1.5 to 7, which is offered in centre-based settings, and is also regulated by a single curriculum framework. These systems are generally overseen by a single authority, most often an education ministry, which is responsible for the entire ECEC framework and for ensuring continuity and quality across age groups. In such cases, any categorisation of ECEC by age group (e.g. as ISCED 01 and ISCED 02) is typically made to facilitate international comparison rather than reflecting governance or structural divisions within the national system. Additionally, split and integrated systems coexist in some countries.

Split system: Austria, Belgium, Brazil, Bulgaria, Chile, Colombia, Czechia, France, Greece, Hungary, Ireland, Israel, Italy, Korea, Mexico, the Netherlands, Poland, Portugal, Romania, the Slovak Republic, Spain, Switzerland, Türkiye and the United States.

Integrated system: Australia, Canada, Costa Rica, Croatia, Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Luxembourg, New Zealand, Norway, Slovenia, Sweden and the United Kingdom.

Both: Germany and Japan.

There are differences in several other aspects of ECEC systems, including the age at which children enter ECEC, the number of hours they attend and who is responsible for regulating the services. Differences can also be seen in where services are delivered - whether in dedicated centres, schools or home-based settings - as well as whether the services include structured educational activities (Box B1.1).

Varieties of ECEC provision across countries

Other registered ECEC services (classified as outside ISCED) for children aged below 3

According to ISCED 2011 definitions, an early childhood education (ECE) programme/service must meet specific criteria to be classified as ISCED level 0. These include having an intentional educational component (such as a curriculum or defined learning objectives), being institutionalised (centre or home-based but structured for a group of children), maintaining a minimum level of educational component intensity (at least 2 hours per day and/or 100 days per year), being regulated by an education-oriented authority and being staffed by educators with defined qualifications (UNESCO UIS, 2012[11]). Many childcare services for children under the age of 3 do not fulfil all of these criteria. For instance, a private home-based childminder might provide excellent care but follow no structured curriculum or guidelines. Similarly, a crèche run by a ministry of social affairs might prioritise nutrition and care over learning outcomes. Even if these services are not formally considered “educational”, they inevitably support children’s development: through play, social interaction, and routine, children learn motor skills, language, and social norms. These types of ECEC provisions are considered as “other registered ECEC services” outside ISCED level 0.

In 10 OECD and partner countries and economies, all ECEC services for children below 3 are provided through such services outside of ISCED. For example, France and the French Community of Belgium have split systems: childcare services for younger children (such as *crèches, halte-garderies, or accueil familial*) are managed by social or family affairs authorities and not considered ISCED 0 services, whereas *écoles maternelles* (from age 2.5 or 3) are under education authorities and are considered ISCED 0 services. Consequently, even though these countries offer extensive childcare provision, their governance structure and educational content means they are classified differently from similar services in other countries. Likewise, Bulgaria, the Netherlands, Poland and Switzerland primarily provide early childcare for younger children through services that remain outside the ISCED classification (Table B1.3).

In some countries, ECEC programmes outside the ISCED level 0 classification serve functions other than being the main provision for children under the age of 3. For example, in Denmark, New Zealand and Norway, these services often operate on a drop-in basis and are designed to complement the main ECEC system. Their primary role is to support parents, particularly those working or studying, by offering flexible, safe childcare options. As drop-in services, they allow for flexible attendance based on families’ needs, providing a more adaptable form of support for early care (Table B1.3).

There are also some services outside formal early childhood education that serve as alternatives to standard early childhood care options. While many of these are delivered in a caregiver’s home or other home-like settings as regulated home-based provisions, in several countries such settings are covered by an official curriculum and therefore qualify as ISCED level 0. These programmes are designed to broaden the range of available choices for families. For instance, *amas* in Portugal function as regulated, home-based childminders who provide essential ECEC services for up to 4 children simultaneously. Their role complements centre-based childcare options, ensuring that families have diverse and adaptable choices to meet their specific needs. In Australia, In Home Care services provide care by approved educators in the child's home. It is restricted to families who cannot access other types of approved care due to non-standard or variable work hours, geographical isolation from other types of care, or complex or challenging needs. Australia also offers an alternative home-based model that provides care in an educator's home, called Family Day Care. Such home-based models appeal to many families due to their intimate, home-like settings, which often align more closely with the child's everyday living environment. Compared to larger, centre-based facilities, home-based arrangements typically involve fewer children, enabling caregivers to offer more personalised attention and fostering stronger relationships. These home-based settings are particularly valued for its ability to respond more effectively to the individual needs of each child. Furthermore, mixed-age groupings are common in home-based care, allowing siblings to be looked after together and offering parents more convenient scheduling and logistics (European Commission / EACEA / Eurydice, 2025[12]).

Distinct ECEC provision for specific groups

While mainstream ECEC services aim to serve the general population of young children, many countries have developed specialised provisions to address the needs of groups that may require different forms of support, adaptation or access. These distinct types of ECEC provision reflect broader efforts toward inclusion, equity and responsiveness to diverse family and societal contexts.

In several countries, targeted ECEC programmes have been developed to support children with special educational needs (SEN). In Czechia, children aged 4 to 6 with physical, mental, or sensory disabilities may attend Preparatory Stage of Special Basic School that offers tailored support to prepare children for compulsory education (Eurydice, 2025[13]). The Flemish Community of Belgium offers Special Nursery Education that provides tailored ECEC for children aged 2.5 to 6 years with specific educational needs. This system is designed to support children whose developmental requirements cannot be adequately met within mainstream preschool settings (Eurydice, 2025[14]). In Japan, Kindergarten Departments of Special Needs Education Schools are integral to Japan's special needs education system and deliver individualised education and care for 3-5 year-olds with a range of disabilities (NIC-Japan, 2025[15]).

Targeted ECEC provisions also exist for children from ethnic, linguistic and cultural minority populations. In the Netherlands, *Voorschoolse educatie (VE)*, is designed to support children aged 2.5 to 4 years who are at risk of educational disadvantage, particularly in language development. This programme aims to prepare children for a successful start in primary school by enhancing their language, social and cognitive skills through structured play-based learning (Government of the Netherlands, 2022[16]). In Colombia, for instance, *Etnoeducación Preescolar* is a specialised early childhood education approach designed to serve indigenous, Afro-Colombian and other ethnic communities. Rooted in the country's commitment to cultural diversity and inclusion, this model integrates ancestral knowledge, native languages and community values into the educational experience of children aged 3 to 5. Similarly, in New Zealand, *Kōhanga Reo* (meaning "language nest") are ECEC centres that immerse children from birth to school age in *te reo Māori* (the Māori language) and *tikanga Māori* (Māori customs) aiming to revitalise the language and culture through intergenerational transmission (Government of New Zealand, 2025[17]).

A number of unique and context-specific ECEC arrangements also exist. Workplace nurseries in Hungary provide flexible childcare options close to parents' places of employment, facilitating work-life balance. Homeschooling is recognised as an early learning arrangement under specific conditions in Luxembourg, allowing families to take a lead role in their child's early education. Additionally, European Nursery Schools in Belgium and Luxembourg offer multilingual and multicultural ECEC services for children of EU institution employees, aligning with the European Schools' curriculum and governance (for further information about all of these arrangements see Box B1.1).

Box B1.1. Interactive visualisations of the structure of ECEC programmes

An interactive online platform is available to provide complementary contextual information on early childhood education and care (ECEC) programmes. It gives information on the different types of programmes, their duration and starting ages as well as information regarding their governance, curriculum frameworks and monitoring methods.

The platform can be accessed via *the Early Childhood Education and Care (ECEC) Systems Dashboard*.

Enrolment of children under 3

Children under the age of 2 had the lowest participation rates in formal early childhood education (ECE) programmes across OECD countries – only 21% on average in 2023. Enrolment rates among the youngest children can be influenced by a range of factors including the number of places available, parental employment and leave, and the cost of ECEC services or their free provision. Some countries, including Israel, Korea and Luxembourg, report notably higher participation by children under the age of 2, with enrolment rates exceeding 45%. For 2-year-olds, the average enrolment across OECD countries rises to 52%, though this figure masks substantial differences. While some countries, such as India, the Netherlands and Switzerland, provide no ECE programmes classified as ISCED for 2-year-olds, enrolment in formal services exceeds 90% in Iceland, Korea, Norway and Sweden (Table B1.1).

Some countries have high levels of enrolment in other registered ECEC services which are an integral part of ECEC provision, but do not comply with the criteria for ECE (ISCED level 0) (e.g. *crèches* in France and *amas* in Portugal). In the Netherlands, for example, 88% of 2-year-olds and 65% of children under the age of 2 attend such services. Although such programmes exist in many countries, particularly for children under 3, not all countries are able to report the number of children enrolled in them (Table B1.1).

Even when looking at rates in all ECEC programmes, regardless of whether they meet the ISCED standards or not, enrolment rates for children aged 0 to 2 vary widely across OECD and partner countries. In Korea, Luxembourg, the Netherlands and Norway, participation is relatively high, with over 60% of children under 3 enrolled in some form of ECEC. In contrast, enrolment remains below 5% in Mexico and Türkiye for this age group, although it increases significantly as children grow older (Table B1.2 and Figure B1.1).

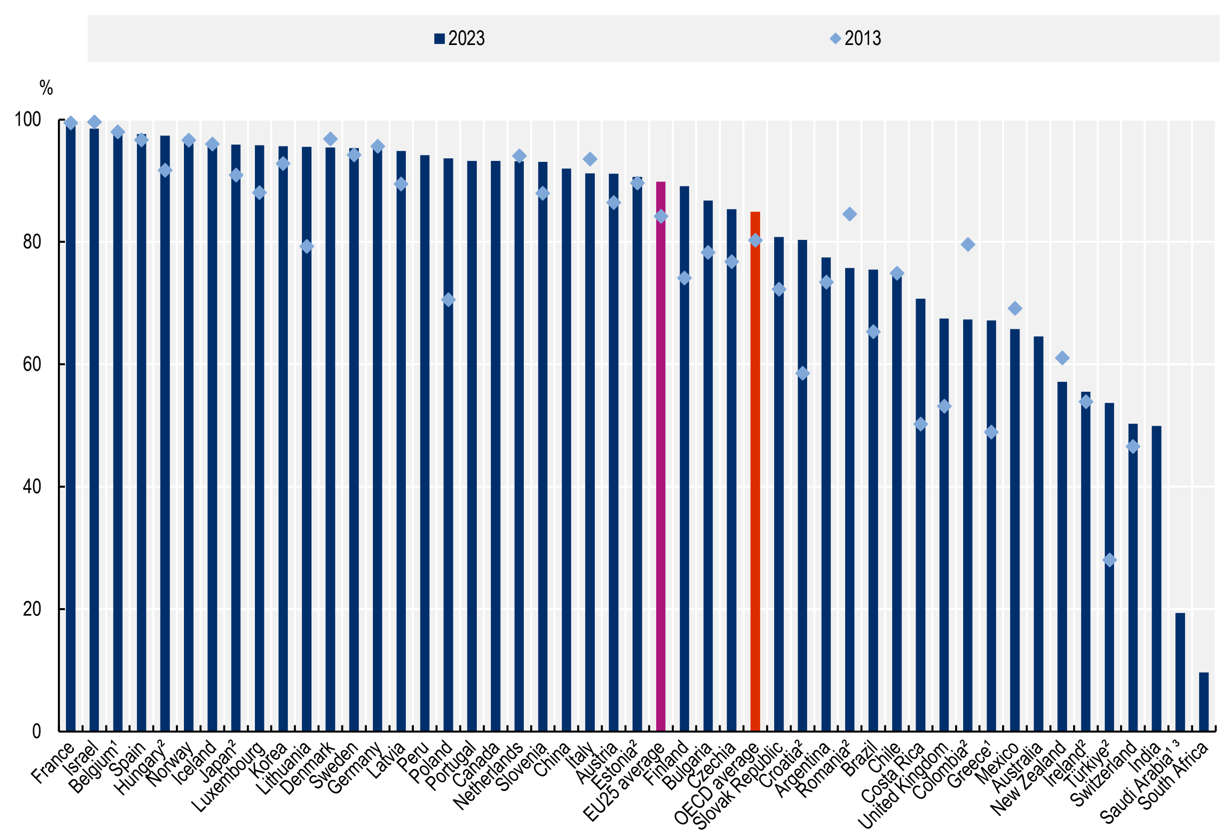
Although almost all OECD countries provide free access to at least one year of ECEC before children start primary education (Annex Table X1.3), ECEC services for children under the age of 3 are typically not fully funded by the government. This reflects the fact that within constrained public budgets for ECEC, priority is often given to pre-primary education (OECD, 2017[18]; OECD, 2024[19]). As a consequence, out-of-pocket costs for ECEC can be an important barrier to enrolment in many OECD countries, particularly for lower income households. On the other hand, in the 11 OECD and partner countries where free ECEC services are available to children under the age of 3 (Annex Table X1.3), enrolment rates are notably high for this age group. For instance, in Korea, where the enrolment rate is 95% among 2-year-olds, children are entitled to some free ECEC services from birth (Table B1.1).

Other factors such as women's labour-market participation, the duration and accessibility of parental leave, and the availability of informal social networks for childcare, are also likely have an impact on enrolment rates among young children. The traditional role of women as principal caregiver can be a determining factor in the use of childcare services. For example, in countries where female labour-force participation remains relatively low, such as Mexico (47%) and Türkiye (36%) respectively, enrolment rates in ECEC are also comparatively low (International Labour Organization, 2025[20]). The length of parental leave is another important determinant. In Hungary and the Slovak Republic, where mothers are entitled to more than three years of paid leave, the enrolment rate for children under the age of 3 stood at 21% in Hungary and 5% in the Slovak Republic in 2023 (OECD, 2025[21]) (Table B1.2). Lastly, in some countries, lower participation in formal ECEC may reflect the widespread reliance on informal childcare arrangements, often provided by extended family, neighbours or friends. Such informal mechanisms can significantly supplement or substitute formal ECEC provision.

Trends in enrolment of children under the age of 3

Enrolment rates for children under the age of 3 in ECE programmes increased by 9 percentage points on average across OECD countries over the past decade, reaching 29% in 2023. The growth has been particularly pronounced in Hungary, Israel, Korea and Lithuania, each recording increases of more than 15 percentage points (Table B1.2). In Korea, the surge is largely the result of substantial increases in public spending on ECEC, which has expanded service availability and reduced the financial burden on families. In addition, the government's broader policy agenda to address persistently low fertility rates has included enhanced parental support measures, notably through improved childcare services and reduced education-related costs (Yang, Hwang and Pareliussen, 2024[22]). Similarly, in Lithuania, policy initiatives have made ECEC available from birth, underpinned by significant public funding that offsets much of the cost for families. There has also been targeted government action to reduce inequalities between urban and rural areas through the creation of multi-functional centres in rural communities and the provision of dedicated transportation to improve access (OECD, 2017[23]).

Figure B1.2. Trends in enrolment rates of 3-5 year-olds in early childhood education (ISCED 0) (2013 and 2023)



1. Early childhood education excludes early childhood educational development programmes (ISCED 01).
2. Year of reference differs from 2013.
3. Year of reference differs from 2023.
For data, see Table B1.2. For a link to download the data, see Tables and Notes section.

In many European countries, increases in enrolment may be attributed to the further impetus provided by the European Union (EU) after the original targets set at the Barcelona 2002 meeting. The EU initially aimed for enrolment rates of at least 33% of children under the age of 3 by 2010. These objectives were revised as part of the wider European Care Strategy in 2022 to ensure more enrolment in ECEC, enhance the social and cognitive development of disadvantaged children, and encourage parents' involvement in the labour market. The revised Barcelona targets for 2030 are for a minimum of 45% of children under the age of 3 to be enrolled in formal childcare (European Comission, 2023[24]).

Enrolment of children aged 3 to 5

Although participation in ECE is not compulsory in all OECD countries, enrolment among children aged 3 and over is widespread. On average across OECD countries, 79% of 3-year-olds, 90% of 4-year-olds and 86% of 5-year-olds are enrolled in ECE. The comparatively lower ECE enrolment rate for 5-year-olds reflects national differences in the starting age for primary education. In countries such as Australia, Ireland, New Zealand and the United Kingdom, primary schooling typically begins at age 5 (Box B1.2), which shifts some enrolment from ECE to primary education. When total enrolment of 5-year-olds is considered, regardless of whether children are enrolled in ECE or primary education, the average enrolment rate across OECD countries rises to 97% (Table B1.1).

In more than half of OECD countries with available data, the enrolment of children in ECE between the ages of 3 and 5 is nearly universal, reaching at least 90% (Table B1.2). The highest enrolment rates of 4-year-olds in either ECE or primary education are in Costa Rica, France, Israel and Peru, where they equal or exceed 99%. In contrast, 50% or less are enrolled in education in Switzerland and Türkiye (Table B1.1). In Switzerland, this lower rate may be partly due to differences across cantons, as each canton sets its own starting age for compulsory education. In some cantons, children start formal education later than in others, which affects enrolment figures at national level. In Türkiye, while the enrolment rate for 4-year-olds remains below 50%, it rises to 98% for 5-year-olds (Table B1.1). This notable increase reflects national education policies that prioritize preschool education for 5-year-olds, one year before the start of compulsory education.

Trends in enrolment of children aged 3 to 5

Between 2013 and 2023, enrolment rates for children aged 3 to 5 in early childhood education rose by 5 percentage points, reaching 85% across OECD countries. The most notable increases were in Costa Rica, Croatia, Poland and Türkiye where enrolment grew by more than 20 percentage points. A major factor behind the gain in Costa Rica has been the 2018 policy extending compulsory education to include two years of pre-primary education for children aged 4 to 6. Consequently, the enrolment rate of 3-5 year-olds in early childhood education increased from 50% to 71% over the last decade (Table B1.2). The largest gains occurred among children aged 4 and older, with enrolment exceeding 95%, effectively achieving universal coverage. However, participation among 3-year-olds remains comparatively low at 6% in 2023 (Table B1.1). This illustrates how compulsory education reforms in pre-primary education can successfully accelerate enrolment growth, ensuring that more children benefit from critical early learning opportunities during their foundational years. In Poland, the increase in enrolment of 3-5 year-olds from 71% in 2013 to 94% in 2023 has been due to the gradual extension of the legal entitlement to age 3 starting from 2014, combined with capped fees for additional hours beyond the standard free provision and expansions in preschool infrastructure (Polish Eurydice Unit, 2014[25]; UNHCR, 2025[26]; Eurydice, 2025[27]).

Box B1.2. Specific educational programmes aiming to facilitate transition to primary education

All OECD countries have established pre-primary education programmes to support the development, well-being and early learning of young children. A key objective of these programmes is to facilitate a smooth and confident transition from early childhood education into primary education. While this goal is inherent to most pre-primary settings, some countries offer a specific (mostly one-year) preparatory programme immediately before primary school entry. These programmes, often referred to as “reception,” “bridging year,” or simply the final year of kindergarten, are designed to build essential foundational skills. They focus on socialisation, early literacy and numeracy, language acquisition, and classroom behaviours such as following routines and participating in structured activities. The aim is to ensure that children are well prepared and experience a positive start to their formal educational journey.

In Australia, the foundation year serves as the formal entry point into primary education for children aged approximately 5. While attendance is optional in several states and territories, children typically start school around the age of 5, with compulsory schooling beginning by age 6. The foundation year aims to establish essential skills in literacy, numeracy and socialisation through structured yet child-centred activities. This model positions the preparatory stage firmly within the primary education framework (Australian Curriculum, 2025[28]) .

Denmark's kindergarten class, also known as preschool class (*Børnehaveklasse*), caters to 6-year-olds and has acted as a mandatory bridge between early childhood education and primary school since 2009. Denmark distinguishes itself with its strong emphasis on play-based learning, promoting social and emotional development alongside early academic exposure (Blomgren, 2022[29]).

Romania's preparatory grade *(Clasa Pregătitoare)*, introduced in 2012 for 6-year-olds, formalises what was previously an informal transition phase. Romania's model aligns closely with school-readiness objectives, focusing on bridging the gap between kindergarten and formal school through basic literacy, numeracy and behavioural norms (Eurydice, 2025[30]).

In contrast, Ireland implements a two-stage preparatory system within its primary education cycle: Junior and Senior Infants programmes, spanning ages 4 to 6. This model stands out for introducing children to formal schooling at an earlier age than most OECD peers, blending play with structured learning to cultivate both cognitive and social skills (Government of Ireland, 2025[31]).

Similarly, in England and Wales (United Kingdom), the Early Years of Foundation Stage within primary education spans two years and serves as a transition from play-based nursery to formal schooling. Its second year is also known as the reception year. It promotes holistic development across personal, social, emotional and academic domains, balancing structured learning with child-initiated exploration (UK Government, 2025[32]).

Policy approaches to increasing enrolment in ECEC

The benefits of ECEC for children's development, well-being and the transition to primary education have led many policy makers to introduce targeted measures to increase participation. These measures include lowering the starting age of compulsory education, establishing legal entitlements to ECEC services, offering free hours, or providing substantial financial support for childcare services. Countries may adopt different policies or combinations of policies, tailored to specific age groups and target populations. Additional strategies that complement these measures include ECEC network planning, data and monitoring mechanisms for needs identification, flexibility of ECEC provision, information services and administrative accessibility, and efforts to foster family and community engagement and trust (OECD, 2025[8]).

Expansion of compulsory education to include pre-primary

Establishing a legal obligation to attend ECEC by lowering the starting age of compulsory education to cover some pre-primary education has become a common strategy to increase enrolment rates with several countries adopting this approach in the past decade. Costa Rica and Hungary lowered the compulsory starting age by two years, from 6 to 4, while eight other OECD and partner countries have lowered it by one year. Countries with already high enrolment rates at the national level may implement such policies in order to strategically target disadvantaged subpopulations. For instance, Belgium aims to increase regular attendance among migrant children with low-educated parents in large cities through the inclusion of one year of pre-primary education in compulsory education (European Commission, 2019[33]). Similarly, starting from the 2019/2020 school year, France lowered the starting age of compulsory education, making early childhood education compulsory for children aged 3 to 5 to ensure access for all. This measure, combined with smaller class sizes in pre-primary education, aims to strengthen foundational learning and reduce inequalities in Priority Education Network schools (REP and REP+) (OECD, 2020[34]). Lithuania has also adopted a targeted approach, mandating compulsory pre-school education for children under the age of 5 living in households at socio-economic risk (Eurydice, 2023[35]).

As a result, pre-primary education is now compulsory for one or more years in 24 OECD and partner countries. The age at which compulsory education begins varies. In 11 countries, it starts just one year before entry into primary education, while in others it starts earlier – at 3 in France, Hungary, Israel and Mexico; at 4 in Argentina, Brazil, Bulgaria, Costa Rica, Greece and Luxembourg; and between the ages 4 and 5 in Switzerland (Table B1.2).

Legal entitlement to guaranteed ECEC places

Participation in ECEC is not compulsory for children under the age of 3 in any OECD country. However, some countries offer a legal entitlement to an ECEC place, obligating public authorities to guarantee access to services for any child within the relevant age range, upon parental request (Eurydice, 2023[36]). For example, Czechia and Poland have gradually extended the entitlement to start from the age of 3 (fully implemented in Poland from 2017 and in Czechia from 2018), despite only mandating one year of pre-primary education before primary education (European Commission / EACEA / Eurydice, 2025[12]). Other countries, including Brazil, Canada, Hungary, Korea, Mexico and New Zealand, offer this legal entitlement from birth. This approach allows families to choose early education options that suit their needs while promoting widespread participation (Annex Table X1.3.).

Enhanced capacity for more places in ECEC services

Countries are also making widespread efforts to expand capacity in order to increase enrolment rates for children aged 3 and below. For example, Spain is using the funds from the European Recovery and Resilience Facility (RRF) to create over 60 000 places by 2025. This initiative is intended to meet all demands for early education for children under the age of 3 and to reduce regional disparities in participation (Government of Spain, 2024[37]).

Free ECEC hours

Affordability plays a critical role in ensuring that ECEC services are accessible to as many children as possible. In recent years, many countries, particularly in Europe, have introduced free or partially subsidised ECEC services, often targeting disadvantaged groups. For example, children aged 1 to 4 in Luxembourg are entitled to 20 hours of free ECEC per week, with parents paying for any additional hours. In Lithuania, children from birth to primary education receive 20 free hours per week, with any additional costs covered by government and municipal funds. Romania offers free ECEC for all children from birth, both for the full-day programme (10 hours) and the short programme (5 hours). In 2022, Bulgaria abolished fees for ECEC for all children from the age of 3 (European Commission / EACEA / Eurydice, 2025[12]). Sweden obliges municipalities to provide ECEC places to children regardless of the duration of their stay in the country or whether parents have formally requested enrolment. In Croatia, Roma parents are exempt from kindergarten fees (Eurydice, 2023[36]).

Financial support mechanisms to enhance affordability

In countries with integrated ECEC systems, additional measures have been taken to enhance affordability and accessibility through substantial financial support and subsidies for parents. In Denmark, for instance, although ECEC services are not fully free before age 6, parental fees are capped at no more than 25% of the setting's estimated gross operating costs. Financial allowances are also available for low-income families, which can cover part or all of the parental payment (økonomisk fripladstilskud). In Iceland, decisions on parental fees are made by individual municipalities but cannot be higher than the total cost of the services provided. However, in the largest municipalities it is common for parents to pay 10-20% of the cost of ECEC services. Finland introduced a maximum monthly fee of EUR 311 as of August 2024, with over half of families exempt from any charges. In Sweden, the majority of ECEC funding for children aged 1 to 6 comes from municipal budgets. Parents pay a small income-dependent contribution, which is further capped based on the number of children per household (European Commission / EACEA / Eurydice, 2025[12]).

Since 2006, Japan introduced centres for early childhood education and care *(Nintei Kodomo-en)*. These centres combine the advantages of both kindergartens and day care centres, performing functions such as: to provide pre-school children education and care, regardless of whether their guardians are working or not, and to support parenting in the community through services such as parenting consultations and places where parents and children gather (Imoto, 2007[38]). This reform has been implemented in light of diversifying needs in ECEC.

Demographic trends among young children

From 2013 to 2023, many countries have seen the number of children aged 0 to 4 plateauing or even declining. In particular, several countries in Asia (e.g. China, Korea and Japan) and Southern Europe (e.g. Greece, Italy and Spain) experienced substantial decreases in this age group, ranging from 22% to 40% (Figure B1.3). While some of these changes are driven by country-specific factors such as emigration, they largely mirror global trends in declining birth rates. On average across OECD countries, fertility rates fell from about 1.7 in the early 2010s to around 1.5 by 2022 (OECD, 2024[39]). A few countries have experienced growing populations of young children between 2013 and 2023, often due to higher fertility or immigration. For instance, Israel maintained a fertility rate close to 3, leading to an increase in its under-5 population (OECD, 2024[39]). In Austria, Germany, Luxembourg and Switzerland, despite persistently low fertility rates, the number of young children has risen, primarily as a result of immigration (Figure B1.3). Austria, Luxembourg and Switzerland report some of the highest shares of non-national children among those under 5, at 21% of 0-4 year-olds in Austria, 28% in Luxembourg and 47%, in Switzerland (Eurostat, 2025[40]).

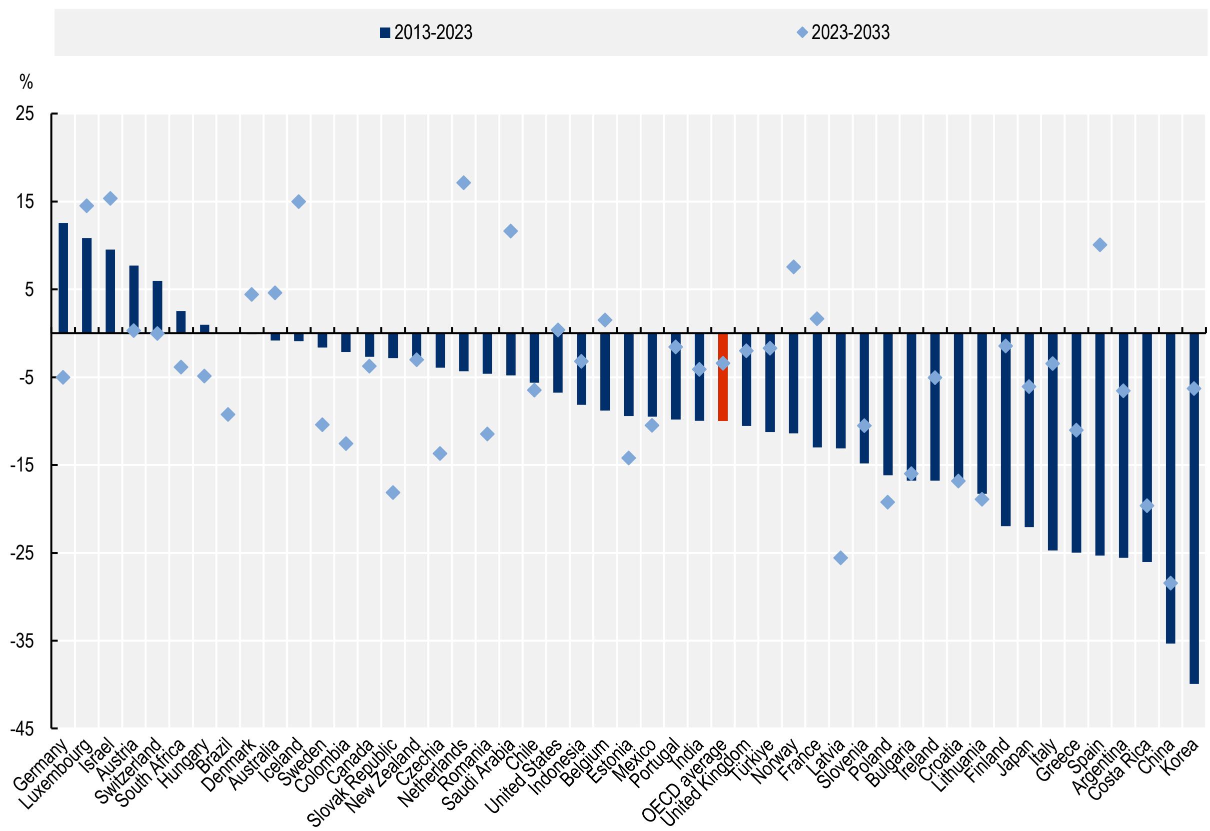
Looking ahead to the period from 2023 to 2033, population projections suggest these trends will continue, with most OECD countries expected to see further declines in their populations of young children. However, the extent of these declines will vary across countries. In Greece, Italy, Japan and Korea, the rate of decrease is expected to slow relative to the previous decade. In contrast, several Eastern European countries, including Bulgaria, Poland and the Slovak Republic, are projected to see sharper drops of over 15%, driven by persistent low fertility and ongoing emigration. Similarly, Latin American countries like Argentina, Brazil, Colombia and Costa Rica are expected to experience declines in their young child populations of over 9%, largely due to falling birth rates. Meanwhile, Israel's young population is projected to keep growing by 15% due to its high fertility rate. In addition, several Northern European countries (e.g. Denmark, Iceland, the Netherlands and Norway), along with Australia might offset low fertility rates with immigration, stabilising and even increasing the number of children under 5 (Figure B1.3).

Declines in the numbers of young children can pose some challenges in ECEC systems. In areas where child populations fall below sustainable levels, ECEC centres, particularly private providers reliant on fee income, may struggle to remain operational, potentially leading to unequal access to high-quality early education (European Commission / EACEA / Eurydice, 2025[12]).

Despite declining enrolment in pre-primary education in many countries, recent trends indicate that public expenditure per child in ECEC has increased (see Figure C2.3 in Chapter C2). This presents an opportunity to optimise education systems by reallocating resources more efficiently, focusing on quality over quantity (OECD, 2024[10]). Smaller group sizes may enable lower child-to-teacher ratios, more manageable workloads, reduced staff stress and improved learning environments (see Chapter D2). Therefore, the demographic shift may be reflected in a stronger policy emphasis on improving quality.

Another consideration is the geographical distribution of demographic change. Even if the number of young children declines at national level, certain cities (often capitals or economically strong regions) may still experience increases due to internal migration or differing fertility patterns, while other regions see big falls. This regional disparity underscores the need for targeted policy responses to address the unique demographic challenges across different areas. For example, in Germany, some eastern Länder have faced consistent population declines among children, whereas major cities such as Munich and Berlin have experienced baby booms in certain years, leading to uneven demand for ECEC services (Pastuszka, 2023[41]).

Figure B1.3. Historical and projected changes in the population of 0-4 year-olds (2013 to 2023 and 2023 to 2033)



For data, see OECD Society Statistics – Demography Indicators at OECD Data Explorer (OECD, 2025[42]).

Definitions

Early childhood education (ECE): ECEC services in adherence with the criteria defined in the ISCED 2011 classification (see ISCED 01 and 02 definitions) are considered early childhood education programmes and are therefore referred to as ECE in this chapter. Others registered ECEC services are considered an integral part of countries' ECEC provision but are not in adherence with all the ISCED criteria. Therefore, the term of ECE excludes the programmes that do not meet the ISCED 2011 criteria.

ISCED 01 refers to **early childhood educational development services** which mostly serve children aged 0 to 2 and **ISCED 02** refers to **pre-primary education** which mostly serves children aged 3 to 5.

ECEC services: The types of ECEC services available to children and parents differ greatly. Despite those differences, most ECEC settings typically fall into one of the following categories (for more information see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)).

1. **Regular centre-based ECEC:** More formalised ECEC centres typically belong to one of these three subcategories:

a. *Centre-based ECEC for children under age 3*: Often called "crèches", these settings may have an educational function, but they are typically attached to the social or welfare sector and associated with an emphasis on care. Many of them are part-time and provided in schools, but they can also be provided in designated ECEC centres.

b. *Centre-based ECEC for children from the age of 3*: Often called kindergarten or pre-school, these settings tend to be more formalised and are often linked to the education system.

c. *Age-integrated centre-based ECEC for children from birth or age 1 up to the beginning of primary school*: These settings offer a holistic pedagogical provision of education and care (often full-day).

2. **Family childcare ECEC:** Licensed home-based ECEC, which is most prevalent for children under age 3. These settings may or may not have an educational function and be part of the regular ECEC system.
3. **Licensed or formalised drop-in ECEC centres:** Often receiving children across the entire ECEC age bracket and even beyond, these drop-in centres allow parents to complement home-based care by family members or family childcare with more institutionalised services on an ad hoc basis (without having to apply for a place).

Informal care services: Generally unregulated care arranged by the child's parent either in the child's home or elsewhere, provided by relatives, friends, neighbours, babysitters or nannies; these services are not covered in this chapter.

Methodology

Enrolment rates

Net enrolment rates are calculated by dividing the number of children of a particular age / age group enrolled in ECEC by the size of the population of that age / age group. While enrolment and population figures refer to the same period in most cases, mismatches may occur due to data availability and different sources used in some countries. Therefore, population data is adjusted in the calculation of enrolment rates by age. This adjustment method ensures that if the cumulative enrolment data across all ISCED levels exceeds the population data for a particular age, the population data for that age is adjusted to match the total enrolment for the corresponding age.

Source

Data refer to the reference year 2023 (school year 2022/23) and are based on the UNESCO-UIS/OECD/Eurostat data collection on education statistics administered by the OECD in 2025. For more information, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (*https://doi.org/10.1787/fcfaf2d1-en*)

Data from Argentina, the People's Republic of China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Data on historical and projected changes in the population of 0-4 year-olds are available in the OECD Society Statistics (OECD, 2025[42]).

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Tables and Notes

Chapter B1 Tables

StatLink https://stat.link/mpa650

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table B1.1. Enrolment rates in early childhood education (ISCED 0), other ECEC services (outside ISCED) and primary education, by age (2023)

Note: Early childhood education (ECE) = ISCED 0, other registered ECEC services = ECEC services outside the scope of ISCED 0, because they are not in adherence with all ISCED criteria. To be classified in ISCED 0, ECEC services should: 1) have adequate intentional educational properties; 2) be institutionalised (usually school-based or otherwise institutionalised for a group of children); 3) have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year; 4) have a regulatory framework recognised by the relevant national authorities (e.g. curriculum); and 5) have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators).

1. In other registered ECEC services, 2-year-olds includes children under the age of 2, and 3-year-olds includes children aged 3 to 5.
2. Early childhood education excludes early childhood educational development programmes (ISCED 01).
3. Early childhood education includes only early childhood educational development programmes (ISCED 01) for the ages 2 and below.
4. Enrolment of 2 year-olds covers only children started to compulsory pre-primary education earlier than theoretical starting age.
5. Year of reference differs from 2023: 2022 for Saudi Arabia.

Table B1.2. Trends in enrolment rates of children in early childhood education and care and pre-primary education, by age group (2013 and 2023)

Note: Early childhood education (ECE) = ISCED 0, other registered ECEC services = ECEC services outside the scope of ISCED 0, because they are not in adherence with all ISCED criteria. To be classified in ISCED 0, ECEC services should: 1) have adequate intentional educational properties; 2) be institutionalised (usually school-based or otherwise institutionalised for a group of children); 3) have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year; 4) have a regulatory framework recognised by the relevant national authorities (e.g. curriculum); and 5) have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators).

1. The legal age at which school becomes compulsory is 6, but children are allowed in legislation to attend school from age 5, and most do.
2. Year of reference differs from 2013: 2014 for Croatia, Estonia, Japan and Türkiye; 2015 for Colombia, Hungary and Romania; and 2017 for Ireland.
3. Enrolment of 2 year-olds covers only children started to compulsory pre-primary education earlier than theoretical starting age.
4. Year of reference differs from 2023: 2022 for Saudi Arabia.

Table B1.3. Characteristics of early childhood education and care programmes not classified as ISCED programmes (other ECEC services) (2023)

Note: Table excludes programmes outside ISCED that are designed to serve before/after school and during school holidays. More data on outside ISCED programmes available at the Dashboard on Early Education and Care (ECEC) Systems. A regulatory framework for ISCED level 0 programmes is defined as legislation, guidelines, standards or instructions issued or recognised by whichever relevant authority governs the provision of educational programmes to very young children (e.g. a ministry of education, other relevant ministry or affiliated institution). Educational activities are activities that are designed and organised to achieve pre-determined learning objectives or to accomplish a specific set of educational tasks over a sustained period. They are deliberate activities intended to bring about learning. They are planned in a pattern or sequence with explicit or implicit aims, involving a providing agency (person/body) that facilitates a learning environment, and a method of instruction.

1. There is, however, a national charter that must be applied to all childcare plans. This charter sets out the principles applicable to the care of young children, whatever the type of care, in application of article L. 214-1-1 of the French Code de l'action sociale et des familles.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table B1.1. Enrolment rates in early childhood education (ISCED 0), other ECEC services (outside ISCED) and primary education, by age (2023)

	Under age 2		Age 2		Age 3		Age 4		Age 5	
	Early childhood education (ISCED 0)	Other registered ECEC services	Early childhood education (ISCED 0)	Other registered ECEC services	Early childhood education (ISCED 0)	Other registered ECEC services	Early childhood education (ISCED 0)	Primary education	Early childhood education (ISCED 0)	Primary education
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	37	4	67	3	79	3	91	1	24	76
Austria[1]	8	x(4)	49	7[d]	81	1[d]	94	0	98	0
Belgium[2]	m	m	54	m	98	m	98	0	98	1
Canada[3]	20	18	45	23	m	m	m	0	93	0
Chile	14	0	32	0	53	0	81	0	92	0
Colombia	3	m	21	m	47	m	71	0	84	16
Costa Rica	2	m	4	m	6	m	100	0	97	0
Czechia	a	m	10	m	74	m	88	0	94	0
Denmark	40	m	87	m	95	m	96	0	95	1
Estonia	8	3	65	8	87	4	92	0	92	0
Finland	23	m	74	m	86	m	90	0	91	0
France[4]	a	m	10	m	100	m	100	0	99	1
Germany	26	a	72	a	92	a	96	0	98	0
Greece	m	m	m	m	m	m	99	0	100	0
Hungary	5	a	52	a	97	a	98	0	98	0
Iceland	29	11	95	0	96	0	96	0	96	1
Ireland	12	m	32	m	91	m	76	18	1	98
Israel	50	a	76	a	100	a	99	0	96	1
Italy	0	m	14	m	91	m	94	0	89	7
Japan	32	a	74	a	91	a	98	0	99	0
Korea	55	a	95	a	98	a	95	0	95	0
Latvia	10	m	80	m	92	m	95	0	98	0
Lithuania	12	a	84	a	94	a	96	0	97	0
Luxembourg	60	0	81	0	91	m	98	0	98	1
Mexico	3	a	8	a	41	a	81	0	75	24
Netherlands	a	65	a	88	86	4	95	0	98	0
New Zealand	32	5	66	5	80	4	84	0	8	88
Norway	45	m	95	m	97	m	97	0	97	0
Poland	a	11	7	27	85	3	96	0	100	0
Portugal	m	m	m	m	83	m	97	0	100	0
Slovak Republic	a	m	14	m	69	m	81	0	92	0
Slovenia	31	m	84	m	91	m	94	0	95	0
Spain	33	m	71	m	97	m	98	0	98	0
Sweden	27	0	91	1	94	1	96	0	96	0
Switzerland	a	m	0	m	2	m	49	0	99	1
Türkiye	0	a	2	a	15	a	43	0	98	2
United Kingdom	1	m	54	m	100	m	98	2	0	100
United States	m	m	m	m	m	m	m	0	m	4
OECD average	22	m	52	m	79	m	90	1	86	11
Partner and/or accession countries										
Argentina	2	m	12	m	47	m	90	0	94	0
Brazil	15	a	42	a	60	a	76	0	91	1
Bulgaria	a	5	15	43	81	0	86	0	93	0
China	a	m	5	m	76	m	95	a	100	0
Croatia	18	m	57	m	76	m	81	0	85	0
India	a	m	a	m	36	m	63	45	51	60
Indonesia	m	m	m	m	m	m	m	m	m	m
Peru	3	m	13	m	83	m	99	0	100	0
Romania	2	m	22	m	68	m	78	0	81	0
Saudi Arabia[5]	m	m	m	m	m	m	m	a	m	5
South Africa	m	m	m	m	m	m	m	a	m	0
EU25 average	20	m	51	m	87	m	92	1	91	4
G20 average	17	m	41	m	71	m	85	3	77	18

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B1.2. Trends in enrolment rates of children in early childhood education and care and pre-primary education, by age group (2013 and 2023)

	Starting age of compulsory education	Typical starting age of primary education	Under age 3						Age 3 to 5					
			Early childhood educational development (ISCED 01)		Pre-primary (ISCED 02)		Early childhood education (ISCED 0)		Early childhood educational development (ISCED 01)		Pre-primary (ISCED 02)		Early childhood education (ISCED 0)	
	2023		2013	2023	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Australia[1]	6	5	m	47	m	0	m	47	m	1	m	64	m	65
Austria	5	6	12	20	2	2	15	22	3	5	83	86	86	91
Belgium	5	6	m	m	17	18	m	m	a	a	98	98	m	m
Canada	6	6	m	28	m	m	m	m	m	0	m	93	m	93
Chile	6	6	17	20	1	0	18	20	2	2	73	73	75	75
Colombia[2]	5	6	33	9	0	0	33	9	0	0	80	67	80	67
Costa Rica	4	6	1	3	0	0	1	3	2	2	48	69	50	71
Czechia	5	6	a	a	6	3	6	3	a	a	77	85	77	85
Denmark	6	6	60	55	0	0	61	55	2	1	95	95	97	95
Estonia[2]	7	7	x(7)	x(8)	x(7)	x(8)	23	28	x(13)	x(14)	x(13)	x(14)	90	91
Finland	6	7	28	40	0	0	28	40	0	0	74	89	74	89
France[3]	3	6	a	a	4	4	4	4	a	a	99	100	99	100
Germany	6	6	33	42	0	0	33	42	0	0	96	95	96	95
Greece	4	6	m	m	0	0	m	m	m	m	49	67	m	m
Hungary[2]	3	6	5	21	0	0	5	21	1	4	91	93	92	97
Iceland	6	6	44	51	0	0	44	51	0	0	96	96	96	96
Ireland[1, 2]	6	5	m	18	0	0	8	18	m	0	54	55	54	55
Israel	3	6	31	58	0	0	31	58	0	0	100	99	100	99
Italy	6	6	a	a	5	5	5	5	a	a	94	91	94	91
Japan[2]	6	6	a	43	0	3	0	46	a	0	91	96	91	96
Korea	6	6	52	69	0	0	52	69	0	0	93	96	93	96
Latvia	5	7	24	35	0	0	24	35	0	0	90	95	90	95
Lithuania	6	7	21	37	0	0	21	37	0	0	79	96	79	96
Luxembourg	4	6	a	67	2	0	2	67	a	0	88	96	88	96
Mexico	3	6	2	3	0	1	2	4	1	0	68	65	69	66
Netherlands	5	6	a	a	0	0	0	0	a	a	94	93	94	93
New Zealand[1]	6	5	39	44	0	0	39	44	0	0	61	57	61	57
Norway	6	6	55	61	0	0	55	61	0	0	97	97	97	97
Poland	6	7	a	a	2	2	2	2	a	a	71	94	71	94
Portugal	6	6	m	m	0	0	m	m	m	m	88	93	m	93
Slovak Republic	5	6	a	a	4	5	4	5	a	a	72	81	72	81
Slovenia	6	6	37	49	0	0	37	49	0	0	88	93	88	93
Spain	6	6	32	46	0	0	32	46	0	0	97	98	97	98
Sweden	6	7	46	49	0	0	46	49	0	0	94	95	94	95
Switzerland	4-5	6	a	a	0	0	0	0	a	a	47	50	47	50
Türkiye[2]	5.75	6	0	1	0	0	0	1	0	0	28	54	28	54
United Kingdom	5	5	11	19	0	0	11	19	0	0	53	67	53	67
United States	5	6	m	m	0	0	m	m	m	m	64	64	m	m
OECD average			28	36	1	1	20	29	1	1	79	84	80	85
Partner and/or accession countries														
Argentina	4	6	4	6	0	0	5	6	1	0	73	77	73	77
Brazil	4	6	16	25	0	0	16	25	16	23	50	53	65	75
Bulgaria	4	7	a	a	3	5	3	5	a	a	78	87	78	87
China	6	6	a	a	m	2	m	2	a	a	m	92	m	92
Croatia[2]	5.5	7	17	28	2	3	19	31	1	3	57	77	59	80
India	6	6	a	a	m	m	m	m	a	a	m	50	m	50
Indonesia	7	7	m	m	m	m	m	m	m	m	m	m	m	m
Peru	5	6	m	6	m	0	m	6	m	0	m	94	m	94
Romania[2]	4	6	3	4	4	5	7	9	0	0	84	75	85	76
Saudi Arabia[4]	6	6	m	m	m	m	m	m	m	m	13	19	m	m
South Africa	7	7	m	m	m	0	m	m	m	m	m	10	m	m
EU25 average			27	36	2	2	17	26	1	1	83	89	84	90
G20 average			17	28	m	1	m	24	2	2	m	68	m	79

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B1.3. Characteristics of early childhood education and care programmes not classified as ISCED programmes (other ECEC services) (2023)

	Programme name in English	Theoretical starting age (in years)	Theoretical duration (in years)	Requirement for a minimum level of attendance	General practice for level of attendance	Institutional setting type	Existence of regulatory framework
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Australia	In home care	0	5	No	m	Conducted in the home of the child	Yes
Austria	Regulated home-based care	0	6	No	m	Home-based	Yes
Canada	Child care programmes	0-2	1-3	m	m	Home or centre-based	m
Costa Rica	National Child Care and Development Network	0	m	m	m	m	m
Czechia	Child Care and Protection	0.5	m	m	m	m	m
	Day nursery	0	2	m	m	m	m
	Centre-based setting	0	3	m	m	m	m
Denmark	Private childcare arrangements	0.5	5.5	No	Flexible attendance depending on the needs of parents	Home or centre-based	Yes
Estonia	Childcare service	0	3	No	Flexible attendance depending on the needs and age of child decided by service provider and parents	Conducted in the home of the child or elsewhere suitable for childcare	Yes
Finland	Open ECEC activities	0-6	a	No	Typically random attendance	m	Yes
France[1]	Creches	0	3	No	m	Centre-based	Yes
	Micro-creches	0	3	No	m	Centre-based	Yes
	Childminders	0	3	No	m	Home-based	Yes
Greece	Child centre	2.5	3.5	Yes	Minimum 4.5 hours per day/225 days per year depending on parents' decision	m	Yes
Iceland	Home-based provision	1	0.8-5	No	89% of children stay for 8 hours or more per day, up to 48 weeks per year depending on parents' decision	Home-based	Yes
Latvia	Child supervision services	1.5	3.5	No	Part-time up to 4 hours a day, or full-time longer than 4 hours a day depending on parents' decision	Home-based or centre-based	Yes
Netherlands	Private day care centres	0	3	No	Less than 40 hours per week depending on the number of hours that the parents work	Centre-based	Yes
	In-home care by childminders	0	4	No	Less than 40 hours per week depending on the number of hours that the parents work	Home-based	Yes
New Zealand	Playgroups	0-4	a	No	Maximum 4 hours per day	Community-based and parent-run organisations	Yes
Norway	Open kindergartens	1	m	No	Flexible attendance depending on the needs of parents	Centre-based	No
Poland	Care for children aged 0-3 years	0-3	2.0	No	m	Home-based or centre-based	Yes
Portugal	Day care, home-based provision (childminder)	0	3	No	m	Home-based	m
Slovak Republic	Childcare facilities up to 3 years of age	0.0	3.0	No	m	Centre-based	Yes
Slovenia	Care of preschool children	1	5	No	m	Home-based	Yes
Spain	Centre-based provision	0.0	3.0	No	m	Centre-based	No
Sweden	Pedagogical care	1	5	No	Flexible attendance depending on the needs of parents	Home-based	Yes
Switzerland	Centre-based ECEC	0.5	3.5	No	m	Centre-based	Yes
	Home-based ECEC	0.5	3.5	No	m	Home-based	Yes
United States	Day care	0-5	1-3	No	m	Home, community or centre-based	No
Other participants							
French Comm. (Belgium)	Home-based settings	0	2.5	No	Mostly 2 days/week and up to 5 days/week depending on parents' decision	Home-based	Yes
	Centre-based settings	0	2.5	No	Mostly 2 days/week and up to 5 days/week depending on parents' decision	Centre-based	Yes
England (UK)	Non-registered providers	0	5	No	m	a	No
Northern Ireland (UK)	Sure Start	0	3	No	m	Centre-based	Yes
Wales (UK)	Full day care	0	5	No	A continuous period of 4 hours or more in any day	Centre-based	Yes
	Sessional day care	0	5	No	A continuous period of 4 hours or less in any day, mainly used by children aged from 3 to 5 rather than babies or toddlers	Centre-based	Yes
	Creches	0	5	No	Flexible attendance depending on the needs of parents	Centre-based	Yes
Partners and/or accession countries							
Bulgaria	Day nursery	0.25	2.6	No	In the case of absence, a certified document by component authority should be presented	Centre-based	Yes
Romania	Day care centres	0	1.5	No	m	Centre-based	Yes

OECD countries	Regulatory body	Educational activities	Number of enrolled students	Function of the programme
	(8)	(9)	(10)	(11)
Australia	A combination of subnational and national frameworks	No educational activities prescribed	m	Alternative for parents who can't access to other approved care
Austria	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	7 370	Alternative to other approved care for parents
Canada	m	Recommended but not mandatory	219 100	Alternative to other approved care for parents
Costa Rica	m	m	m	Alternative to other approved care for parents
	m	m	m	Alternative to other approved care for parents
Czechia	m	m	m	Main ECEC provision for children under the age of 3
	m	m	m	
Denmark	The Ministry of Education	Recommended but not mandatory	m	Operating on a drop-in basis for parents and complementing the main ECEC sector
Estonia	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	2 729	Alternative or complementary to the main ECEC sector for parents
Finland	The Ministry of Education	Mandatory activities prescribed	m	Alternative for parents who take care of their child at home instead enrolling the main ECEC sector
France[1]	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	Main ECEC provision for children under the age of 3
	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	
	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	
Greece	The Ministry of Education	No educational activities prescribed	m	Alternative to other approved care for parents
Iceland	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	1 013	Alternative for parents to use after the end of parental leave until the start of pre-school
Latvia	A combination of subnational and national frameworks	No educational activities prescribed	m	Alternative to other approved care for parents
Netherlands	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	m	Main ECEC provision for children under the age of 3 and 4 and not at the risk of disadvantage
	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	m	
New Zealand	The Ministry of Education	No educational activities prescribed	m	Operating on a drop-in basis for parents and complementing the main ECEC sector
Norway	Not regulated by a nationally-recognised framework	No educational activities prescribed	m	Operating on a drop-in basis for parents and complementing the main ECEC sector
Poland	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	186 317	Main ECEC provision for children under the age of 3
Portugal	m	Recommended but not mandatory	m	Alternative to other approved care for parents
Slovak Republic	Another relevant ministry (e.g. Health or Welfare)	Mandatory activities prescribed	m	Main ECEC provision for children under the age of 3
Slovenia	The Ministry of Education	No educational activities prescribed	m	Alternative to other approved care for parents
Spain	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	Alternative to other approved care for parents
Sweden	The Ministry of Education	Recommended but not mandatory	6 810	Alternative to other approved care for parents
Switzerland	A combination of subnational and national frameworks	Recommended but not mandatory	m	Main ECEC provision for children under the age of 4
	A combination of subnational and national frameworks	Recommended but not mandatory	m	
United States	Not regulated by a nationally-recognised framework	No educational activities prescribed	m	Alternative to other approved care for parents
Other participants				
French Comm. (Belgium)	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	m	Main ECEC provision for children under the age of 2.5
	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	m	
England (UK)	Not regulated by a nationally-recognised framework	No educational activities prescribed	m	Alternative to other approved care for parents
Northern Ireland (UK)	The Ministry of Education	Mandatory activities prescribed	m	Main ECEC provision for children under the age of 3
Wales (UK)	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	m	Main ECEC provision for children under the age of 3
	Another relevant ministry (e.g. Health or Welfare)	Recommended but not mandatory	m	Main ECEC provision for children under the age of 3
	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	Operating on a drop-in basis for parents and complementing the main ECEC sector
Partners and/or accession countries				
Bulgaria	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	Main ECEC provision for children under the age of 3
Romania	Another relevant ministry (e.g. Health or Welfare)	No educational activities prescribed	m	Alternative to other approved care for parents

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter B2. How do different education systems shape student pathways in primary and lower secondary education?

Highlights

- Most OECD countries have effectively achieved near-universal enrolment for children aged 6 to 14, with enrolment rates exceeding 98%.
- On average across OECD countries, 2% of students in primary education and near 4% of those in general lower secondary programmes are over-age for their grade, meaning they are at least two years older than the intended age for that grade. This is primarily due to grade repetition and, to a lesser extent, late school entry.
- Countries offering vocational lower secondary programmes target different populations and pursue diverse objectives, based on the needs and expectations of relevant groups, including early tracked students in general versus vocational programmes in initial education, students with special educational needs and adult learners.

Context

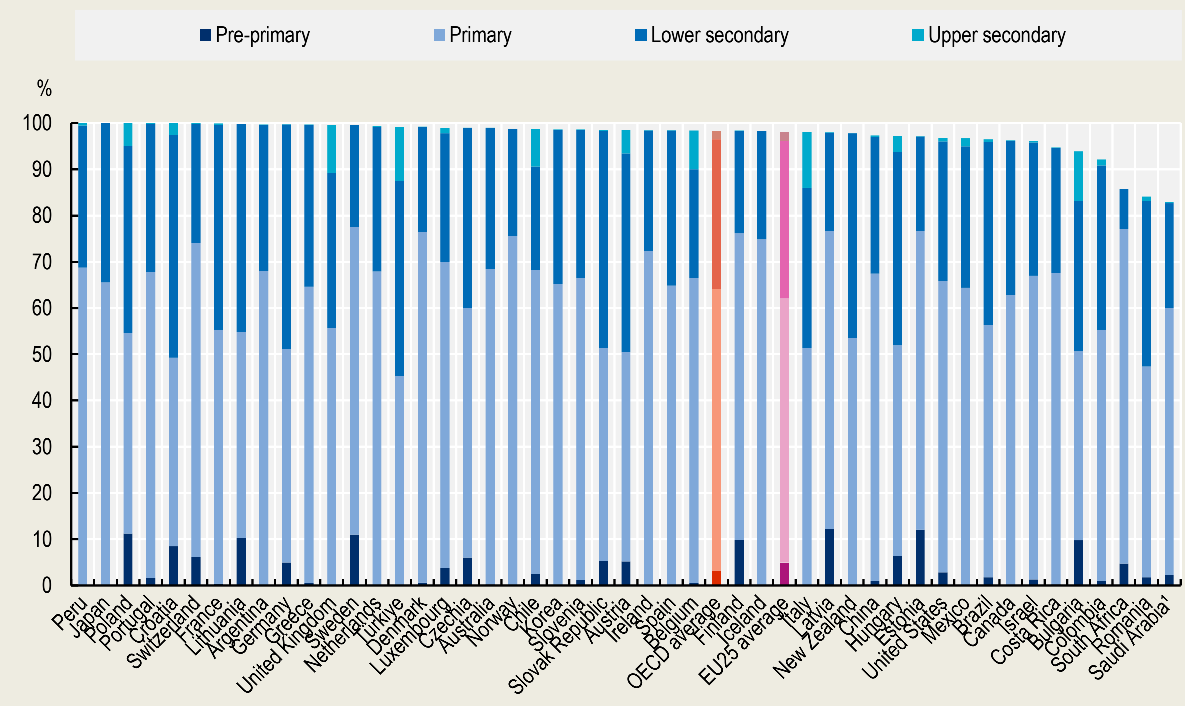
The way education systems structure and manage primary and lower secondary education has a profound influence on how student pathways develop. These stages typically span ages 6 to 14 and lay the foundation for future academic achievement, personal development and transitions into further education. Differences in enrolment policies, progression criteria and support systems determine whether students remain on track or face early disruptions in their learning trajectories. Understanding how these systems shape pathways begin with analysing how students enter, move through and complete these foundational stages.

One of the visible markers of system variation is the age-grade alignment. While most children in OECD countries are enrolled in school by age 6, some systems allow flexibility over starting ages, and practices around grade repetition differ considerably. In countries where repetition is common, students may be more likely to fall behind their peers and lose motivation. In contrast, systems that promote automatic progression often implement support mechanisms to ensure students acquire the expected skills without being held back. These choices reflect differing beliefs about how best to support learning and address underperformance, and they shape student experiences from the earliest years of schooling.

Another key factor influencing student pathways is the structure of lower secondary education. Some countries provide a single common track for all students through the end of compulsory education, while others introduce tracking or programme differentiation – sometimes as early as age 10 or 11. Early tracking in lower secondary education is most commonly implemented as differentiation by programme orientation, such as general versus vocational tracks, similar to what is seen in upper secondary education. It can channel students into more specialised educational routes, but it may also restrict flexibility and reinforce socio-economic disparities. The presence and design of special education provision, and the extent to which students with additional needs are included in mainstream settings or placed in separate programmes, also reflect national approaches to equity and student diversity.

The transition from lower to upper secondary education is a pivotal moment that either sustains or alters the trajectory established in earlier stages. In some systems, this transition is automatic; in others, it is selective and based on academic performance or institutional capacity. How countries manage this transition – through counselling, curriculum alignment or flexible programme options – can make the difference between smooth progression and early disengagement. Thus, analysing these mechanisms offers key insights into how education systems influence the continuity, quality and equity of student pathways (Santos and Vitoria, 2023[1]).

Figure B2.1. Enrolment rates of 6-14 year-olds, by level of education (2023)



1. Year of reference differs from 2023.
For data, see Table B2.1. For a link to download the data, see Tables and Notes section.

Other findings

- In some countries the share of over-age students in lower secondary education has fallen; for example targeted reforms aimed at restricting grade repetition have reduced the proportion by around 2 percentage points in Chile, 4 percentage points in Belgium and 5 percentage points in Spain.
- As of 2023, on average, 7% of lower secondary students in OECD countries were enrolled in vocational programmes. Largely due to the inclusion of certain adult programmes in the classification, these tracks serve a wider age range of students – with an average age ranging from 11 years in some countries to as high as 45 years, compared to 12-18 years in general

programmes. They also tend to be more male dominated, whereas general programmes are more gender balanced.

- The share of fourth grade students reporting they were absent from school at least once a week rose modestly across countries, increasing from 11% in 2019 on average to 13% in 2023. The rate is notably higher in Saudi Arabia (32%) and exceeds 15% in Brazil, Chile and South Africa. The lowest levels of absenteeism were in Japan and Korea, with rates below 5%.
- In Iceland, Ireland, Japan, Norway, and Poland, over 95% of students start upper secondary education at the expected age, indicating strong age-grade alignment. In contrast, in Hungary, the Netherlands, and Switzerland, 35% or fewer do so, suggesting widespread delayed entry.

Analysis

Enrolment of students aged 6 to 14

The age range 6-14 corresponds broadly to primary and lower secondary education, which are part of compulsory schooling in all OECD countries. This has contributed to the effective achievement of universal enrolment among this age group, with two thirds of countries enrolling over 98% of 6-14 year-olds. These high enrolment levels are a direct outcome of policies ensuring free and compulsory basic education and consistent investment in physical and human resources. Minor shortfalls in enrolment can signal specific challenges. For instance, if a country's enrolment rate for 6-14 year-olds is slightly below 100%, it may indicate that the school system is not fully reaching certain groups (perhaps children with special educational needs, or those in remote communities or from low-income families). Although most partner countries have closed the gap in basic enrolment, some continue to face challenges in reaching the remaining children. This includes India, Romania, Saudi Arabia and South Africa where enrolment among this age group is under 90% (Figure B2.1).

The distribution of enrolment by education level reflects structural differences in education systems. Typically, primary education lasts six years in OECD countries, but it ranges from four years in several countries (e.g. Austria and Hungary) to eight years in Ireland. Lower secondary education generally lasts three years, ranging from two years in Belgium and Chile to six years in Germany and Lithuania (Annex Table X1.3). As a result, around two-thirds of students aged 6 to 14 are enrolled in primary education on average across OECD countries. Countries where primary education starts later, or upper secondary education starts earlier, may see greater shares of 6-14 year-olds enrolled at pre-primary or upper secondary levels. For example, in Finland and Sweden primary education begins at the age of 7 and over 10% of students aged 6 to 14 are enrolled in pre-primary education in these countries. Similarly, in all countries where upper secondary education starts at the age of 14, over 8% of students aged 6 to 14 are enrolled in upper secondary education (Figure B2.1).

The arrangement and duration of a country's primary, lower secondary and upper secondary schooling (e.g. 4+4+4 or four years at each level, 6+3+3 or 4+6+3) can reflect a combination of historical factors and educational philosophies. For instance, the 4+6+3 system in Germany (four years of primary, six years of lower secondary and three years of upper secondary education) results in a longer lower secondary phase that supports early tracking, where students begin to specialise in academic or vocational pathways at a relatively young age. Conversely, Finland delays tracking until after nine years of comprehensive education (i.e. 6+3+3), allowing all students to receive the same education before specialising. Meanwhile, countries such as Hungary and the Republic of Türkiye have adopted the 4+4+4 structure, reflecting a more even division of time spent in primary, lower secondary and upper secondary education (Annex Table X1.3).

Over the past decade, Poland stands out among OECD and partner countries as the only one to have significantly changed its primary and secondary education structure. In 2017, the country implemented a major reform that restructured its education system. Previously organised in a 6+3+4 model, the new system adopted an 8+4 structure. This reform extended primary education to eight years, introduced a uniform curriculum for this entire period and abolished lower secondary schools *(gimnazjum)*. For the sake of international comparability, however, education data of Poland are broken down into 4+4+4, redistributing enrolment figures between primary and lower secondary levels (Table B2.1). The main goal of the reform was to equip students with a solid foundation of general education that supports both personal development and the demands of a modern labour market (Wojniak and Majorek, 2018[2]).

Poland's move aligns with a broader trend in Nordic countries, which have long favoured comprehensive education systems and delay academic tracking until upper secondary education. For example, Sweden already has a nine-year comprehensive primary education system and plans to introduce a ten-year model by 2028, incorporating the current final year of compulsory early childhood education and care (ECEC) into the first year of primary education (Government of Sweden, 2024[3]).

Over-age students in initial education

In 2023, on average across OECD countries, 2% of students in primary education and near 4% of those in general lower secondary programmes were over-age for their grade, meaning they are at least two years older than the intended age for that grade. There is considerable variation across OECD countries in the proportion of over-age students. At primary level, in Colombia, Hungary and the Slovak Republic, more than 6% of students are over-age. In contrast, in countries such as Iceland, Ireland, Japan, Norway, Sweden and the United Kingdom, nearly all students progress through primary education at the intended age or just one year older. At the lower secondary level, more than 8% of students in general programmes are over-age in Austria, Brazil, Colombia, Costa Rica, Hungary and Luxembourg, while the shares are negligible in Ireland, Korea and Sweden (Table B2.2).

In nearly all OECD and partner countries, the primary reason students are over-age for their grade is grade repetition (see next section), however other policies and factors can compound the rates. Once students become over-age at the primary level for any reason, they tend to remain so in subsequent levels of education. One of the reasons for being over-age is late entry into primary education. This can result from parents choosing to delay school entry or from a lack of access to education at the appropriate starting age. In some countries, regulations regarding school entry age vary across regions (e.g. across cantons in Switzerland), allowing for flexible entry into primary education. These regional differences can contribute to a higher share of over-age students at primary level. Regions that permit later school entry than the national average may thus have disproportionately higher rates of over-age students.

Reception or integration classes for newly arrived migrant students can also contribute to this trend. For example, in Switzerland, non-German/French/Italian-speaking newcomers, sometimes as old as 13, may be placed in Grades 2 to 6 *Aufnahmeklassen* (admission classes) for up to two years to acquire language skills before joining age-appropriate classes, increasing the share of students being over-age at the primary level (Canton of Zurich, 2025[4]). Similarly, in Luxembourg, the presence of a diverse student population, particularly those from immigrant backgrounds facing language barriers and cultural adjustments, often results in late school entry or enrolment in *cours d'accueil* (welcome courses), contributing to a high share of over-age students (Government of Luxembourg, 2025[5]).

Grade repeaters

Grade repetition occurs when a student does not meet the requirements to advance to the next grade and must repeat the year, reinforcing age disparities as they progress through the education system. In 2023, on average, 1.4% of primary students in OECD countries and 2.5% of lower secondary students in general programmes were repeating their grade. This marks a slight increase at the primary level compared to 2015 (rising from 1.3 to 1.4), but a decline at the lower secondary level (falling from 3.0 to 2.5). Countries such as Belgium, Chile and Spain, which historically had high repetition rates in lower secondary education, have seen consistent declines due to targeted policy reforms. As a result, fewer students were over-age in 2023 than in 2015 in these systems. Colombia, however, presents an exception. Despite increases in grade repetition in both primary and general lower secondary education partly due to post-pandemic issues, the share of over-age students has declined. This atypical pattern may reflect progress in addressing other factors that contribute to being over-age, such as improved access to education at the appropriate starting age (Figure B2.2).

Grade repetition policies

In some countries, the concept of grade repetition either does not exist or is very rare in practice. For example, in many Nordic education systems, students typically progress automatically to the next grade at the end of the school year at both primary and lower secondary levels, regardless of their academic performance (OECD, 2023[6]). As a result, the proportion of over-age students is close to zero, except where children started school late or because of student transfers. Although grade repetition is legally allowed in countries like Finland and Sweden, it is rarely implemented. Instead, students who receive failing grades are generally offered remedial support – such as summer school or additional tutoring – to help them catch up without having to repeat the year (Finnish National Agency for Education, 2025[7]; Jönsson, 2018[8]).

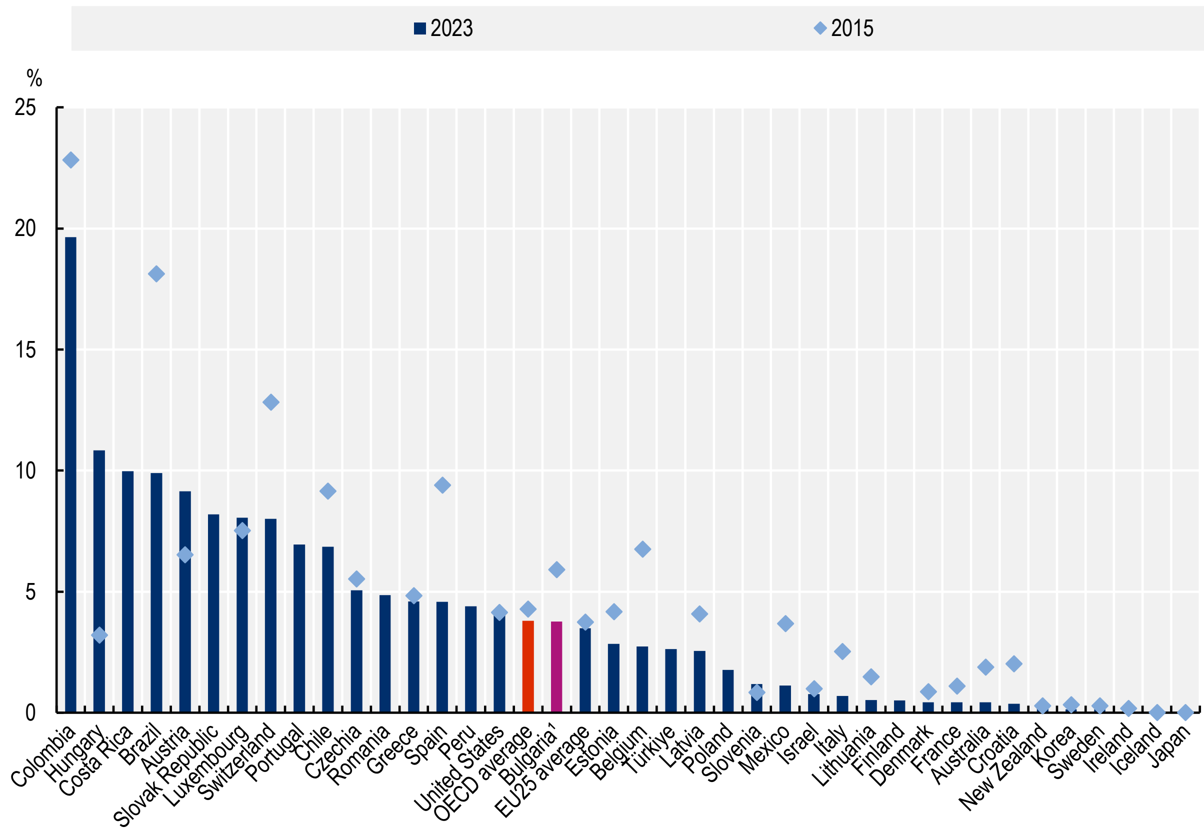
Among the countries which do use grade repetition and have data available, 17 have restrictions on the practice. These restrictions may apply in certain grades or specific types of programmes or schools, or there may be limits on the number of times a student can repeat a grade in their current level of education (see Table B3.4.2 in (OECD, 2023[9])). For instance, in Romania, repetition is not permitted in the first two grades of primary education, while in Germany, it generally does not occur during these early years. In both France and Germany, repetition is typically limited to once per educational cycle (e.g. primary or lower secondary) (DEPP, 2014[10]; Eurydice, 2025[11]). In Spain, students are allowed to repeat a maximum of twice during their whole compulsory education (Eurydice, 2025[12]).

In contrast, some education systems have historically relied more heavily on grade repetition as a policy tool. However, even in these systems, new regulations over the past decade have significantly reduced the use of repetition. Chile and Spain have challenges with over-age enrolment stemming from both repetition and delayed school entry. In Chile, a 2018 law eliminated automatic grade retention. While the new regulation does not prohibit grade repetition outright, it mandates that it should be used only as an exceptional measure (López, Vandecandelaere and Allende González, 2025[13]). Similarly, in Spain, grade repetition is now regarded as a last resort, applied only after all ordinary reinforcement and support measures have been exhausted to address a student's learning difficulties (Eurydice, 2025[12]).

The impact of grade repetition and being-over age on educational outcomes

Grade repetition is intended to help struggling students before they move on to the next grade. However, its effectiveness is disputed and may depend on the level of education being repeated. Research indicates that, below upper secondary level, grade repetition mostly results in negative student outcomes. Students who repeat a grade in their current level of education tend to perform worse academically, have more negative attitudes towards school at age 15, are less likely to obtain a secondary or higher education qualification and are more likely to drop out of school altogether, even after accounting for socio-economic background and individual characteristics (OECD, 2023[6]; Moulin and Sari, 2025[14]). Other research shows that the negative effects are disproportionately greater for disadvantaged students and students from ethnic minorities (Education Endowment Foundation, 2025[15]). Students who are over-age due to grade repetition may feel stigmatised or isolated, which can contribute to them leaving school early (UNESCO-UIS, 2012[16]). Teachers may also face challenges in teaching mixed-aged classes, as they have to handle a wider range of maturity and skill levels (Cronin, 2019[17]).

Figure B2.2. Trends in the share of general lower secondary students over-age for their grade (2015 and 2023)



1. Year of reference differs from 2015.
For data, see Table B2.2. For a link to download the data, see Tables and Notes section.

Profile of lower secondary students

In most OECD and partner countries, lower secondary education is comprehensive, with all students following a general curriculum. However, in some systems, students are tracked earlier into different programme. Early tracking is most commonly implemented as differentiation by programme orientation, such as general versus vocational tracks, even before they start upper secondary education. In addition, several countries offer vocational lower secondary programmes specifically designed for students with special education needs and adult learners. As of 2023, an average of 7% of lower secondary students across OECD countries were enrolled in vocational programmes. In countries where these vocational pathways are available, there are notable differences in the student profiles between general and vocational tracks. Students in general lower secondary programmes tend to be younger, with their average age ranging from 12 to 18 years across countries. In contrast, vocational lower secondary programmes serve a broader age range, with the average age spanning from 11 to 45 years, largely due to the inclusion of certain adult programmes in the classification. The gender distributions also vary. Male and female students are represented in roughly equal proportions in general lower secondary programmes, while male students account for a larger share of those enrolled in vocational lower secondary pathways (Table B2.3).

Target groups and objectives of lower secondary vocational programmes

Countries offering vocational lower secondary programmes target different populations and pursue diverse objectives, based on the needs of and expectations from relevant target groups. Key target groups often include early tracked students in initial education, students with special educational needs and adult learners.

Early tracking in initial education

Programmes that are mainly designed for early tracked students may aim to provide practical, job-related skills from an early age and improve school engagement through more hands-on and relevant learning. They also aim to align education with local and national labour-market needs by addressing skills shortages and creating a clear pathway to upper secondary vocational or technical education, rather than solely preparing students for immediate employment.

In Costa Rica, one-fifth of lower secondary students were following a vocational track in their initial education in 2023 (Table B2.3). Most technical schools offering these programmes provide a combined curriculum of academic and vocational subjects for students aged 12 to 14. In Croatia, around 10% of lower secondary students are enrolled in arts education (music and dance), which is classified as a vocational lower secondary programme. Students who wish to pursue a career in the arts and meet compulsory education requirements must complete this specialised programme.

Early tracking in Germany takes place for all students after fourth grade (with a few exceptions in some Länder). Students are assigned into three distinct lower secondary tracks, two of them specifically designed to lead to a vocational upper secondary education. About 4% of lower secondary students are enrolled in vocational programmes that prepare them for upper secondary vocational education and support those who have not completed general lower secondary education. Most of these one-year pre-vocational programmes are intended for students who have completed 9 or 10 years of general education but have not secured a place in the Dual System - Germany's vocational training model that combines company-based training with predominantly public vocational schooling. These programmes prepare students for upper secondary vocational education and also support those who have not completed general lower secondary education but still need to fulfil compulsory schooling requirements.

Early tracking into vocational pathways raises important concerns about students' outcomes and equity. Dividing students into distinct tracks at a young age can reinforce existing achievement gaps and exacerbate social inequalities. Students from disadvantaged backgrounds or those with learning difficulties are often disproportionately placed in vocational tracks, while academically advantaged students tend to dominate general tracks. This stratification can limit the long-term opportunities of vocational students, particularly if the vocational track is perceived as lower status or lacks strong academic content. International evidence suggests that in systems where students are selected into different programmes at a younger age, there tends to be a stronger correlation between socio-economic background and academic performance. Early tracking has been shown to increase both overall inequality and the influence of family background on learning outcomes (OECD, 2023[6]; Contini and Cugnata, 2020[18]; Piopiunik, 2013[19]).

Another consideration is what happens after lower secondary education. In systems using early vocational tracks, lower secondary vocational students typically continue into upper secondary vocational pathways. If lower secondary vocational education is of high quality and well aligned with further education and training, students can still achieve strong outcomes, including well-recognised qualifications and better labour-market prospects. Countries like Germany and the Netherlands, which have well-established apprenticeship systems, often view early vocational pathways as effective in their contexts. These systems provide students with respected vocational credentials by the age of 18. Nonetheless, there is growing emphasis even in these countries on maintaining pathways to further education such as tertiary-level options to ensure that early tracking decisions do not limit students' future prospects.

Students with special education needs

The objectives of vocational lower secondary programmes for students with special educational needs often differ from those for the general student population. These programmes are designed to provide individualised learning tailored to the abilities and needs of each student. They also aim to support social inclusion and prepare learners for further education, training or employment.

In Czechia, special vocational schools at lower secondary offer one- or two-year programmes focused on practical training for simple tasks. These programmes lead to a final certificate but do not provide access to upper secondary education, reflecting a focus on functional skills and basic employability rather than academic progression.

In the Flemish Community of Belgium, special vocational lower secondary education is offered to children who need temporary or permanent additional support. The system is organised into types of education based on the nature of the disability and the student's capabilities. For example, Education Type 3 combines general, social and vocational training to support students' integration into everyday life and the regular labour market.

In Spain, vocational programmes for students with special educational needs aim to promote equal opportunities and reduce educational inequalities. These programmes are tailored to individual needs and are also available to other learners requiring specific support. Their goal is to enable students to continue their education and transition successfully into training or employment.

Adult education

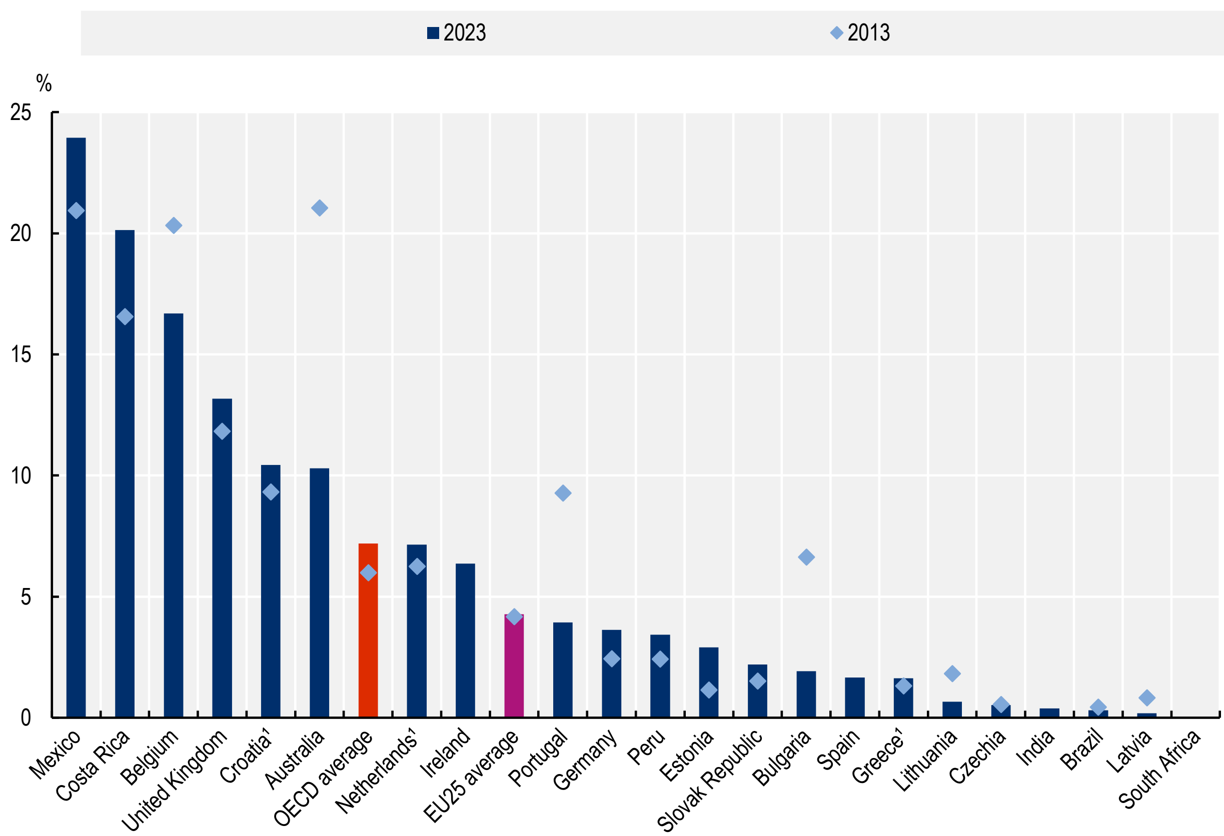
Vocational lower secondary programmes often serve as a second-chance education for adults who left school early. These programmes help them gain basic qualifications, improve their employment prospects or support career changes. By aligning adult learning with national and regional economic priorities, these programmes open pathways for continued personal and professional development.

Mexico has the highest share of students enrolled in vocational lower secondary education among OECD and partner countries, with 24% of students in this track (Table B2.3). Mexico offers a three-year advanced vocational programme designed specifically for adults and leads to the Diploma of Job Training qualification. It focuses heavily on practical skills and includes at least one year of required hands-on experience. Aimed at direct entry into the labour market, the programme does not provide access to higher education. The mean age of participants is 32, reflecting this focus on adult learners.

Ireland offers a range of targeted initiatives for adult learners, especially those with limited formal education or those returning to the workforce. One key provision is community-based training through Community Training Centres, aimed at early school leavers aged 16 to 21. These centres offer personalised learning plans and combine personal, social and vocational development. Also important are the Bridging and Foundation Courses, designed for adults who have been out of the labour market or education for extended periods. These courses help build confidence, support personal development and provide basic vocational skills. The average age of adult learners in Irish vocational programmes is around 42, underscoring the country's strong emphasis on lifelong learning (Table B2.3).

Some countries integrate both students in initial education and adult learners into the same vocational tracks. In the United Kingdom, for instance, the same vocational qualifications at the lower secondary level can be pursued from the age of 14 onwards or by adult learners. The average age of those enrolled in lower secondary vocational programmes is 24, which is relatively young compared to other countries. These programmes account for 13% of all students in lower secondary education and the qualifications focus on practical technical skills for employment or further study. Similarly, in Australia, the vocational education and training (VET) system is open to both young students and adult learners, with 10% of lower secondary students enrolled in VET programmes. The average age of participants is 35, reflecting a strong presence of adult learners. Unlike traditional school-based models, most VET students in Australia are trained through registered training organisations rather than in schools. The system offers clear pathways to further vocational education at the upper secondary level, making it a flexible and inclusive approach to lifelong learning (Table B2.3).

Figure B2.3. Trends in the share of students enrolled in vocational lower secondary education (2013 and 2023)



1. Year of reference differs from 2013.
For data, see Table B2.3. For a link to download the data, see Tables and Notes section.

Trends in the share of students enrolled in vocational lower secondary programmes

The share of students enrolled in vocational lower secondary programmes is relatively stable over the last decade, accounting for 6% of lower secondary students in 2013 and 7% in 2023. Some countries where the share of vocational lower secondary education has historically been higher than the OECD average, have seen notable declines over the past decade. Australia, for example, saw an 11 percentage point drop since 2013, falling to 10% in 2023, primarily due to a shift in enrolment patterns towards stand-alone vocational subjects and upper secondary level qualifications. There were also decreases of 5 percentage points in Bulgaria (from 7% to 2%) and in Portugal (from 9% to 4%) (Figure B2.3). In Portugal, this decline has been largely attributed to severe cuts in funding for adult learning. These financial constraints led to the discontinuation of the New Opportunities programme, the closure of adult education centres and a reduction in the number of adult educators, significantly weakening the country's support system for adult vocational education (Lindeboom, 2023[20])

In contrast, some countries have maintained or even increased enrolment in vocational tracks at the lower secondary level, often due to strong ties to national education strategies or labour market needs. In Costa Rica, early tracking programmes – targeted exclusively at students in initial education – have grown by 3 percentage points over the past decade, reaching 20% in 2023. Similarly, Mexico's Job Training programme, designed specifically for adult learners, increased by 3 percentage points and now stands at 24%, reflecting a growing emphasis on adult vocational pathways (Figure B2.3).

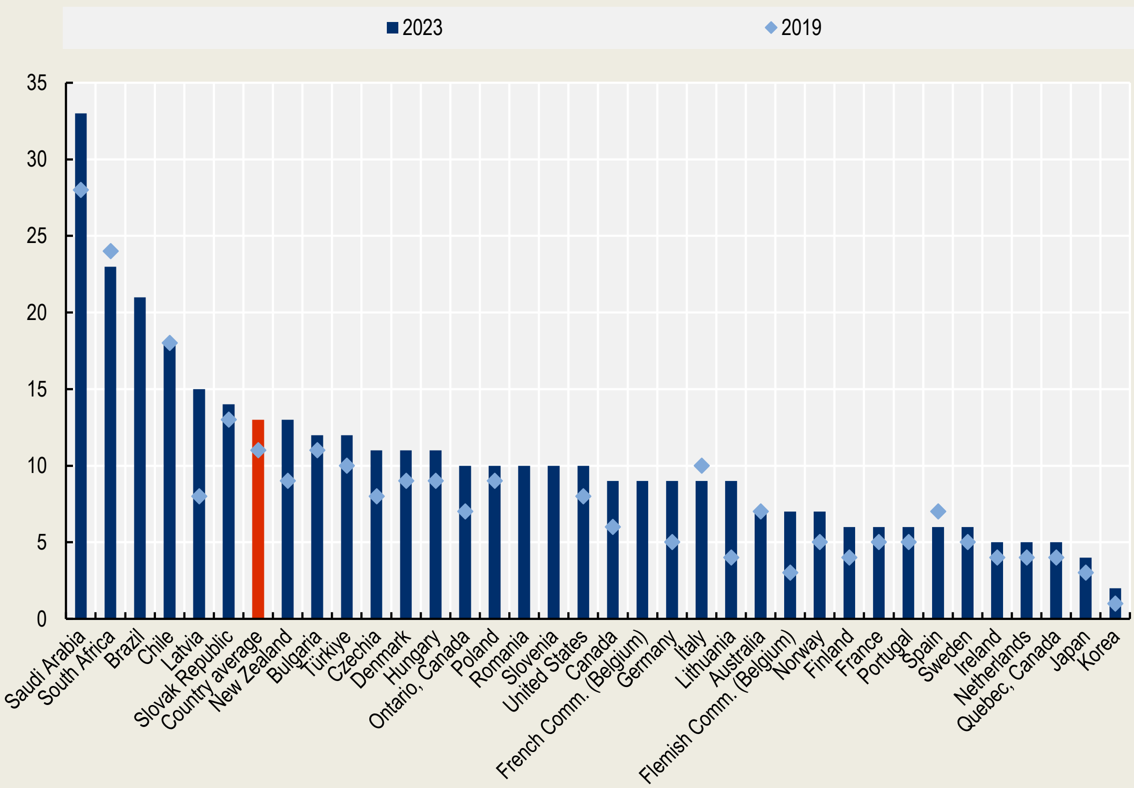
Box B2.1. Student absenteeism and academic achievement: Insights from TIMSS 2023

The Trends in International Mathematics and Science Study (TIMSS) 2023 results provide valuable insights into the extent of student absenteeism and its connection to academic performance in mathematics and science among fourth and eighth grade students. Understanding the patterns of student absenteeism and its relationship with the academic achievement is essential for shaping policies aimed at improving student engagement and learning outcomes.

Studies suggest that absenteeism can stem from multiple factors, including socio-economic challenges, health issues, lack of parental involvement or disengagement from the curriculum (Akkus and Cinkir, 2022[21]; Attwood and Croll, 2006[22]). In 2023, Saudi Arabia had the highest share of fourth grade students reporting they were absent weekly (32%), where lenient past enforcement and culturally tolerated absences played a role (AlSayyari and AlBuhairan, 2020[23]). Brazil, Chile and South Africa, where the shares of students who were absent weekly exceed 15%, face challenges such as poverty, inequality, unsafe environments or long commutes (Moloele and Lekalakala, 2024[24]; Soto Uribe et al., 2023[25]). Latvia and the Slovak Republic were also above the international average of 13%, with absenteeism linked to poor school climate and marginalisation, particularly among Roma students (OECD, 2016[26]; Vasilevich, 2024[27]). In contrast, Japan and Korea recorded the lowest levels of absenteeism, at below 5%, indicating a strong culture of regular attendance (Figure B2.4).

The share of fourth grade students who reported being absent from school at least once a week has increased slightly on average across countries, from 11% in 2019 to 13% in 2023. While most countries saw only minor changes during this period, Latvia, Lithuania and Saudi Arabia recorded the greatest increases in absenteeism over the period, rising by at least 5 percentage points. In contrast, a few systems registered small improvements in attendance, with Italy, South Africa and Spain, each experiencing a 1 percentage point decline in absenteeism (Figure B2.4).

Figure B2.4. Trends in the share of fourth grade students who were absent at least once a week (2019 and 2023)



Note: The TIMSS 2019 and 2023 Student Questionnaires asked students to report on their frequency of absence from school; students could choose “never or almost never,” “once every two months,” “once a month,” “once every two weeks,” or “once a week”.
Source: (von Davier et al., 2024[28]).

The COVID-19 pandemic is believed to be the main factor disrupting schooling in all OECD countries, but its impact on absenteeism has been uneven (OECD, 2024[29]). Some of the countries with sharp increases experienced extended periods of remote learning; for instance, Saudi Arabia had the longest school closure, lasting well into 2021 (Jack and Oster, 2023[30]). In contrast, countries where absenteeism declined despite being strongly affected by the pandemic, like Italy and Spain, implemented an intense post-COVID recovery strategy involving addressing learning gaps, targeted remedial support, financial incentives and community outreach to re-engage vulnerable students (OECD, 2021[31]). According to the research, there is no clear and consistent relationship between pre-pandemic attendance levels, the length of school closures and post-pandemic trends, suggesting there are more nuances about national dynamics and policy effectiveness to be considered (OECD, 2024[29]). This helps explain the modest international average increase in absenteeism despite the global shock of COVID-19, and the varied patterns emerging across countries.

Differences in post-pandemic absenteeism levels can also be seen at a subnational level. For example, in Canada, weekly absentee rates in Ontario rose to 10% in 2023, widening the gap with Quebec, where they only reached 5% (Figure B2.4). This divergence reflects differences in provincial education systems, pandemic responses and attendance monitoring. Ontario experienced longer school closures and more post-COVID disengagement, while Quebec prioritised school reopening and student support.

Differences in how absenteeism is recorded and addressed also contribute to this gap (Gallagher-Mackay et al., 2021[32]; Mathieu, 2021[33]; Kom Mogto et al., 2012[34]).

Missing school is negatively correlated with academic performance in mathematics, highlighting the cumulative effect of absenteeism on mathematics performance, and emphasising how gaps in foundational skills grow over time (Gottfried, 2015[35]). TIMSS 2023 results are consistent with broader evidence that links chronic absenteeism to lower grades, higher dropout risk and long-term disadvantages such as reduced employment prospects, poor health and increased likelihood of engaging in risky behaviours (OECD, 2024[29]). In 2023, countries with higher shares of students absent at least once a week – such as Brazil, Saudi Arabia and South Africa – also tended to report lower average performance in mathematics, while systems with consistently low absenteeism – like Korea, Japan and the Netherlands – performed comparatively well.

Chronic absenteeism also has broader implications, affecting students' social-emotional development, motivation and future educational attainment. Absenteeism has a negative impact on students' academic performance as it weakens student-teacher relationships, disrupts classroom management and diverts school administrators' focus from educational priorities (Akkus and Cinkir, 2022[21]). Socio-economic disadvantages exacerbate absenteeism, with students from low-income backgrounds, those with disabilities and non-native speakers being disproportionately affected (Santibañez and Guarino, 2021[36]). Research further links absenteeism to long-term educational setbacks, including lower graduation rates and reduced employment prospects (Ansari, Hofkens and Pianta, 2020[37]; Hutt and Gottfried, 2019[38]).

Transition into upper secondary education

Many OECD countries aim to ensure universal completion of upper secondary education, with some making all or part of this level compulsory. In most OECD and partner countries, compulsory education ends at least one year after the theoretical starting age for upper secondary education (Annex Table X1.3). Nevertheless, the transition from lower to upper secondary can be shaped by a range of contextual factors. Late school entry, grade repetition and differences in programme structures may delay some students' entry into upper secondary education. These delays, however, often reflect system-level features rather than issues with the transition process itself.

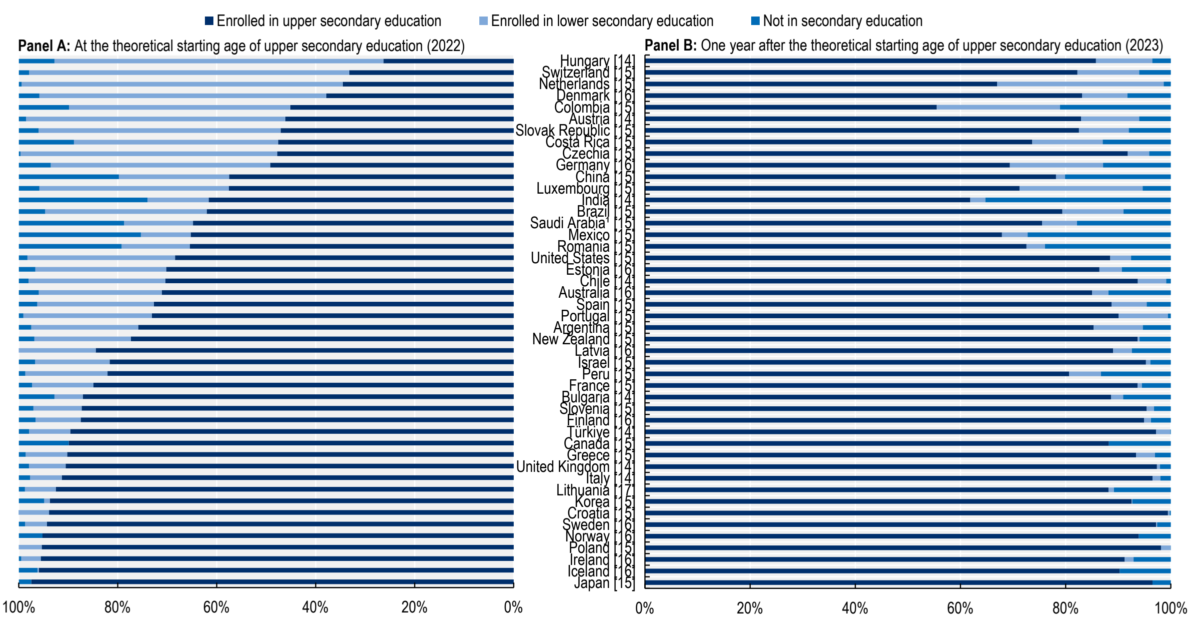
Figure B2.5 highlights enrolment rates at the theoretical starting age for upper secondary education and one year later. Although the theoretical age indicates when students are typically expected to start upper secondary education, actual student progression often varies. In Iceland, Ireland, Japan, Norway and Poland, over 95% of those at the expected age for starting upper secondary education are enrolled at that level, suggesting close alignment between age and grade progression. In contrast, in Hungary, the Netherlands and Switzerland, 35% or less are enrolled in upper secondary education at the expected time, indicating delayed entry for a substantial share of students. However, these delayed entries are not necessarily signs of poor transitions but may instead reflect higher shares of over-age students or systems where progression pathways are more flexible. For instance, in Denmark, the Flemish Community of Belgium, Germany, Israel and the Netherlands, the duration of lower secondary programmes varies, and this is not always reflected in the theoretical starting age of upper secondary education. Consequently, delayed transitions in these systems would often be expected and built into the structure.

One year after the theoretical starting age, patterns of enrolment reflect both delayed progression and early school leaving. In systems with relatively high grade repetition or extended lower secondary programmes, many students transition to upper secondary education after a delay, and these countries record increased upper secondary enrolment rates one year after the theoretical transition year. In countries like Denmark, Hungary and Switzerland, enrolment rates one year on increase by over 45 percentage points, suggesting that delays are temporary, and most students eventually transition. In

Denmark, for instance, it is common for lower secondary graduates to enrol in the 10th grade, either at a boarding school or at a local 10th grade facility. In the 2022/2023 school year, 54% of 9th grade graduates enrolled in 10th grade the following year. As a result, what appears as a delayed transition in the data often reflects a deliberate educational choice rather than disengagement from schooling. In contrast, in countries such as Colombia, Luxembourg and the Netherlands, over 20% of students remain in lower secondary education a year after the expected transition, which may reflect both structural delays and more significant retention issues. (Figure B2.5).

At the same time, a portion of students will have left education a year after the transition age, whether due to dropping out or completing short programmes. High rates of non-enrolment at or one year after this point are particularly concerning. In China, India, Mexico, Romania and Saudi Arabia, over 20% of young people of the starting age for upper secondary are not enrolled in any secondary education programme and the non-enrolment rate generally increases after a year. In Colombia, early school leaving is even more pronounced one year after the theoretical starting age for upper secondary, with a non-enrolment rate of 21% in secondary education(Figure B2.5).These figures are particularly concerning in countries where upper secondary education is part of compulsory schooling. For instance, in Romania, compulsory education ends with completion of upper secondary education. Similarly, in Mexico, it ends with the attainment of a secondary education diploma (OECD, 2024[39]).

Figure B2.5. Distribution of students at and one year after the theoretical starting age of upper secondary education, by enrolment status (2022 and 2023)



How to read: Panel A presents the enrolment rates of students in lower and upper secondary education at the theoretical starting age of upper secondary education in 2022. Panel B shows the enrolment rates of students in lower and upper secondary education one year after that theoretical starting age, in 2023. The share of students classified as “not in secondary education” is calculated as: (100 - enrolment rate in lower secondary - enrolment rate in upper secondary), for both panels. For example, in Austria, the theoretical starting age for upper secondary education is 14. Therefore, Panel A displays enrolment rates of 14-year-olds in lower and upper secondary education in 2022, while Panel B shows enrolment rates of 15-year-olds in 2023.

Note: Numbers in square brackets indicate the theoretical starting ages for upper secondary education.

1. Year of reference differs from 2023.

For data, see OECD Education and Skills Statistics – Enrolment Rate Indicator at OECD Data Explorer.

Definitions

Repeater refers to a student who is not promoted to the next grade or does not complete an educational programme and who remains in the same grade the following school year.

Initial education is the education of individuals before their first entrance to the labour market, i.e. when they will normally be in full-time education. It thus targets individuals who are regarded as children, youth and young adults by their society. It typically takes place in educational institutions in a system designed as a continuous educational pathway.

Adult education is specifically targeted at individuals who are regarded as adults by their society to improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose of completing a level of formal education, or to acquire, refresh or update their knowledge, skills and competencies in a particular field. This also includes what may be referred to as "continuing education", "recurrent education" or "second-chance education".

Methodology

Net enrolment rates are calculated by dividing the number of children of a particular age / age group enrolled by the size of the population of that age / age group. While enrolment and population figures refer to the same period in most cases, mismatches may occur due to data availability and different sources used in some countries. Therefore, population data are adjusted in the calculation of enrolment rates by age. This adjustment method ensures that if the cumulative enrolment data across all ISCED levels exceed the population data for a particular age, the population data for that age are adjusted to match the total enrolment for the corresponding age.

The share of over-age students is the percentage of students in each level of education (primary and lower secondary general education) who are at least two years above the intended age for their grade. The intended age for a given grade is the age at which students would enter the grade if they had started school at the official primary entrance age, had studied full-time and had progressed without repeating or skipping a grade.

Source

Data refer to the reference year 2023 (school year 2022/23) and are based on the UNESCO-UIS/OECD/Eurostat data collection on education statistics administered by the OECD in 2025 (for details, see Education at a Glance 2025 Sources, Methodologies and Technical Notes (https://doi.org/10.1787/fcfaf2d1-en).

Data from Argentina, the People's Republic of China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

Data on student absenteeism are available in TIMSS 2023 International Results (von Davier et al., 2024[28])

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Tables and Notes

Chapter B2 Tables

Table B2.1	Trends in enrolment rates of 6-14 year-olds, by level of education (2013 and 2023)
Table B2.2	Trends in the share of students over-age for their grade and share of repeaters, by level of education (2015 and 2023)
Table B2.3	Profile of lower secondary students (2023)

StatLink https://stat.link/u2yqkg

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table B2.1. Trends in enrolment rates of 6-14 year-olds, by level of education (2013 and 2023)

1. Year of reference differs from 2013: 2014 for Croatia and Estonia; and 2015 for South Africa.
2. Year of reference differs from 2023: 2022 for Saudi Arabia.

Table B2.2. Trends in the share of students over-age for their grade and share of repeaters, by level of education (2015 and 2023)

Note: Students are over-age for their grade in initial education if they are at least two years older than the intended age for their grade. The intended age for a given grade is the age at which students would enter the grade if they had started school at the official primary entrance age, had studied full time and had progressed without repeating or skipping a grade.

1. Year of reference for repeaters differs from 2015: 2016 for Colombia; 2017 for the United States; and 2018 for Portugal.
2. Year of reference for repeaters differs from 2023: 2022 for Argentina, Saudi Arabia and South Africa; and 2021 for China.

Table B2.3. Profile of lower secondary students (2023)

1. Year of reference differs from 2013: 2014 for Croatia and Greece; and 2015 for the Netherlands.
2. Year of reference differs from 2023: 2022 for Saudi Arabia.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table B2.1. Trends in enrolment rates of 6-14 year-olds, by level of education (2013 and 2023)

	Pre-primary		Primary		Lower secondary		Upper secondary		All levels	
	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	0	0	73	68	27	30	0	0	100	99
Austria	5	5	44	45	44	43	6	5	99	98
Belgium	1	1	68	66	23	23	7	8	98	98
Canada	0	0	65	63	34	33	0	0	100	96
Chile	2	3	66	66	21	22	8	8	97	99
Colombia	m	1	59	54	36	36	1	1	96	92
Costa Rica	0	0	65	67	25	27	0	0	91	95
Czechia	6	6	57	54	36	39	0	0	99	99
Denmark	1	1	78	76	21	23	0	0	99	99
Estonia[1]	10	12	65	65	18	20	0	0	97	97
Finland	11	10	66	66	21	22	0	0	99	98
France	0	0	56	55	42	44	0	0	99	100
Germany	4	5	44	46	52	49	0	0	99	100
Greece	0	0	66	64	31	35	0	0	97	100
Hungary	8	6	44	46	42	42	3	3	97	97
Iceland	0	0	77	75	22	23	0	0	99	98
Ireland	0	0	75	72	25	26	0	0	100	98
Israel	2	1	67	66	29	29	0	0	98	96
Italy	0	0	54	51	34	35	10	12	99	98
Japan	0	0	65	66	35	34	0	0	100	100
Korea	0	0	60	65	38	33	0	0	98	99
Latvia	12	12	67	65	18	21	0	0	98	98
Lithuania	9	10	42	45	48	45	0	0	100	100
Luxembourg	1	4	64	66	31	28	1	1	97	99
Mexico	0	0	69	64	29	31	1	2	98	97
Netherlands	0	0	70	68	29	31	0	0	100	99
New Zealand	0	0	55	54	43	44	0	0	98	98
Norway	0	0	77	76	23	23	0	0	100	99
Poland	9	11	65	43	22	40	0	5	96	100
Portugal	1	2	69	66	30	32	0	0	100	100
Slovak Republic	5	5	43	46	47	47	1	0	96	99
Slovenia	1	1	66	65	32	32	0	0	98	99
Spain	0	0	68	65	29	34	0	0	98	98
Sweden	12	11	67	67	20	22	0	0	99	100
Switzerland	6	6	63	68	30	26	0	0	100	100
Türkiye	0	0	45	45	45	42	9	12	99	99
United Kingdom	0	0	56	56	32	34	10	10	98	100
United States	2	3	65	63	29	30	1	1	98	97
OECD average	3	3	62	61	31	32	2	2	98	98
Partner and/or accession countries										
Argentina	0	0	71	68	29	32	0	0	100	100
Brazil	1	2	54	55	39	40	2	1	97	96
Bulgaria	10	10	44	41	36	33	6	11	96	94
China	m	1	m	67	28	29	0	0	m	m
Croatia[1]	8	8	42	41	47	48	3	3	99	100
India	m	m	52	48	27	28	8	12	m	89
Indonesia	m	m	m	m	m	m	m	m	m	m
Peru	m	0	m	69	m	31	m	0	m	100
Romania	2	2	48	46	40	36	2	1	93	84
Saudi Arabia[2]	0	2	52	58	20	23	0	0	92	83
South Africa[1]	6	5	75	72	11	9	2	0	92	86
EU25 average	5	5	59	57	33	34	2	2	98	98
G20 average	m	1	60	59	33	33	3	3	m	96

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B2.2. Trends in the share of students over-age for their grade and share of repeaters, by level of education (2015 and 2023)

	Share of students at least 2 years over-age for their grade in initial education				Share of repeaters				Share of boys among all repeaters	
	Primary		General lower secondary		Primary		General lower secondary		Primary	General lower secondary
	2015	2023	2015	2023	2015	2023	2015	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	0.2	0.1	1.9	0.4	m	m	m	m	m	m
Austria	4.1	5.8	6.5	9.1	2.7	3.3	2.2	3.1	57	58
Belgium	1.4	0.9	6.7	2.7	m	2.2	6.9	4.3	50	57
Canada	m	m	m	m	m	m	m	m	m	m
Chile	5.4	2.2	9.1	6.8	3.6	1.6	4.2	1.5	61	60
Colombia[1]	14.7	11.7	22.8	19.6	2.0	8.3	3.0	10.5	59	61
Costa Rica	m	3.3	m	10.0	3.1	2.1	12.7	6.2	57	59
Czechia	3.4	4.5	5.5	5.1	0.6	0.6	0.9	0.6	55	56
Denmark	0.4	0.2	0.9	0.4	1.0	0.6	1.1	0.8	62	55
Estonia	0.7	0.9	4.2	2.8	0.5	0.6	2.2	1.9	64	57
Finland	m	0.2	m	0.5	0.3	0.3	0.4	0.3	57	51
France	m	m	1.1	0.4	m	1.1	2.3	1.1	54	58
Germany	m	m	m	m	0.4	0.5	2.4	2.5	53	57
Greece	1.7	1.8	4.8	4.6	0.7	1.3	3.8	5.4	52	63
Hungary	1.4	7.7	3.2	10.8	1.7	2.1	2.1	1.6	58	59
Iceland	0.0	0.0	m	m	m	m	m	m	m	m
Ireland	0.0	0.0	0.2	0.1	0.4	0.3	0.1	0.1	53	49
Israel	0.5	0.4	1.0	0.8	1.0	0.8	1.4	1.1	68	68
Italy	0.4	0.2	2.5	0.7	0.4	0.3	3.2	1.6	58	63
Japan	0.0	0.0	0.0	0.0	m	m	m	m	m	m
Korea	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	66	67
Latvia	1.5	0.9	4.1	2.6	0.7	0.8	2.3	1.6	67	63
Lithuania	0.3	0.2	1.5	0.5	0.4	0.3	0.6	0.4	59	72
Luxembourg	1.9	2.2	7.5	8.1	4.0	3.4	9.9	9.3	51	57
Mexico	2.3	0.8	3.7	1.1	0.8	0.5	0.7	0.5	55	52
Netherlands	m	m	m	m	m	m	m	m	m	m
New Zealand	0.2	0.3	0.3	0.2	m	m	m	m	m	m
Norway	0.0	0.0	m	m	0.0	0.0	a	a	a	a
Poland	m	1.1	m	1.8	0.8	0.9	2.6	1.6	61	62
Portugal[1]	m	2.9	m	7.0	3.7	1.9	6.2	3.2	58	61
Slovak Republic	m	7.8	m	8.2	3.1	2.2	1.9	1.3	54	55
Slovenia	0.6	1.2	0.8	1.2	0.7	1.3	0.8	1.1	60	63
Spain	0.2	0.2	9.4	4.6	2.1	1.1	10.1	7.0	56	61
Sweden	0.1	0.1	0.3	0.1	0.0	0.2	0.0	0.3	57	49
Switzerland	5.1	3.6	12.8	8.0	1.1	1.0	1.5	1.0	53	56
Türkiye	m	2.3	m	2.6	1.8	3.3	2.0	3.5	54	50
United Kingdom	0.0	0.0	m	m	0.0	a	a	a	a	a
United States[1]	3.5	4.0	4.1	4.1	1.6	1.8	1.9	1.8	51	55
OECD average	1.8	2.0	4.3	3.8	1.3	1.4	3.0	2.5	57	58
Partner and/or accession countries										
Argentina[2]	m	m	m	m	2.0	2.3	11.0	5.5	50	56
Brazil	8.8	4.0	18.1	9.9	m	m	m	m	m	m
Bulgaria	1.3	1.1	5.9	3.8	0.1	0.5	3.3	2.3	54	60
China[2]	m	m	m	m	0.0	0.0	0.0	0.0	61	58
Croatia	0.3	0.3	2.0	0.4	0.2	0.1	0.4	0.1	26	74
India	m	m	m	m	0.8	1.2	0.5	1.0	53	53
Indonesia	m	m	m	m	m	m	m	m	m	m
Peru	m	1.6	m	4.4	3.2	0.2	4.1	0.2	56	52
Romania	0.1	3.2	m	4.9	0.9	1.7	3.7	3.6	60	59
Saudi Arabia[2]	m	m	m	m	1.3	0.4	1.5	0.3	68	72
South Africa[2]	m	m	m	m	9.2	3.0	16.4	10.6	50	68
EU25 average	1.1	2.0	3.7	3.5	1.2	1.1	2.9	2.3	56	59
G20 average	m	m	m	m	1.7	1.3	3.8	2.6	56	59

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B2.3. Profile of lower secondary students (2023)

	Share of students enrolled in vocational lower secondary programmes		Mean age in lower secondary		Share of female students in lower secondary		Target groups and objective of lower secondary vocational programmes		
			General programmes	Vocational programmes	General programmes	Vocational programmes	Initial education / Early tracking	Students with special education needs	Adult education
	2013	2023	2023	2023	2023	2023	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Australia	21	10	14	35	49	38	Yes	No	Yes
Austria	a	a	12	a	48	a	a	a	a
Belgium	20	17	18	m	50	52	No	Yes	Yes
Canada	a	a	13	a	49	a	a	a	a
Chile	2	a	13	a	48	a	a	a	a
Colombia	a	a	14	a	49	a	a	a	a
Costa Rica	17	20	17	13	50	48	Yes	No	No
Czechia	1	1	13	26	49	42	No	Yes	No
Denmark	a	a	14	a	49	a	a	a	a
Estonia	1	3	14	29	49	45	Yes	No	Yes
Finland	a	a	14	a	49	a	a	a	a
France	a	a	13	a	49	a	a	a	a
Germany	2	4	13	17	49	40	Yes	No	No
Greece[1]	1	2	14	17	48	33	No	Yes	No
Hungary	0	a	13	a	48	a	a	a	a
Iceland	a	a	14	a	48	a	a	a	a
Ireland	m	6	14	42	49	59	No	Yes	Yes
Israel	0	a	13	a	49	a	a	a	a
Italy	a	a	13	a	48	a	a	a	a
Japan	a	a	13	a	49	a	a	a	a
Korea	a	a	13	a	48	a	a	a	a
Latvia	1	0	14	28	49	13	No	Yes	Yes
Lithuania	2	1	14	21	49	37	Yes	No	No
Luxembourg	a	a	14	a	48	a	a	a	a
Mexico	21	24	13	32	50	61	No	No	Yes
Netherlands[1]	6	7	14	17	48	44	Yes	Yes	No
New Zealand	a	a	13	a	49	a	a	a	a
Norway	a	a	14	a	49	a	a	a	a
Poland	1	a	12	a	48	a	a	a	a
Portugal	9	4	14	31	49	50	Yes	No	Yes
Slovak Republic	2	2	13	19	49	46	Yes	Yes	Yes
Slovenia	a	a	13	a	49	a	a	a	a
Spain	0	2	14	29	48	44	No	Yes	Yes
Sweden	a	a	16	a	50	a	a	a	a
Switzerland	0	a	14	a	49	a	a	a	a
Türkiye	a	a	13	a	49	a	a	a	a
United Kingdom	12	13	12	24	49	49	Yes	No	Yes
United States	a	a	13	a	50	a	a	a	a
OECD average	6	7	14	25	49	44			
Partner and/or accession countries									
Argentina	a	a	15	a	49	a	a	a	a
Brazil	0	0	14	40	49	56	No	No	Yes
Bulgaria	7	2	12	45	48	63	No	No	Yes
China	a	a	13	a	46	a	a	a	a
Croatia[1]	9	10	12	11	49	63	Yes	No	No
India	a	0	12	20	48	69	a	a	a
Indonesia	a	a	m	a	m	a	a	a	a
Peru	2	3	14	26	49	57	m	m	m
Romania	a	a	13	a	48	a	a	a	a
Saudi Arabia[2]	a	a	14	a	49	a	a	a	a
South Africa	a	a	15	a	49	a	a	a	a
EU25 average	4	4	14	25	49	45			
G20 average	11	7	13	28	49	52			

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter B3. How do upper secondary and post-secondary non-tertiary education systems support students' progression to tertiary education?

Highlights

- Across OECD countries, the vast majority of students enrolled in general upper secondary education – 90% on average – attend programmes that lead to a full qualification and access to tertiary education.
- On average, 42% of students from general upper secondary tracks who start a bachelor's programme complete it on time, compared to 39% from vocational tracks, suggesting vocational students may struggle more with the academic demands of tertiary education.
- Although overall bachelor's completion rates improve significantly after an additional three years, differences by programme orientation persist. The average completion rate across OECD countries rises to 72% for students from general programmes and 65% for those from vocational programmes.

Context

An upper secondary qualification (ISCED level 3) is often considered the minimum credential for successful entry into the labour market and essential for pursuing higher education. Young people who leave school before completing upper secondary education tend to have worse employment prospects (see Chapters A3 and A4).

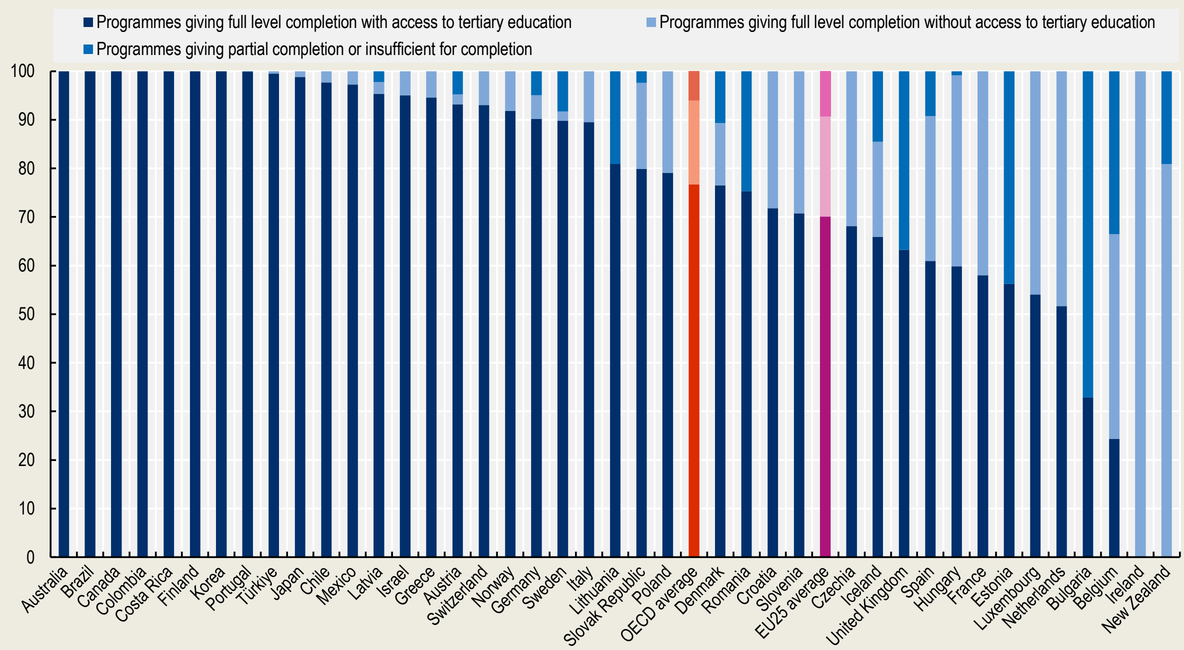
For many students, the transition from lower to upper secondary education involves choosing between general education and vocational education and training (VET). These different programme orientations vary in both their duration and educational focus: general programmes typically prepare students for tertiary education, while vocational programmes are designed to develop occupation-specific skills for direct entry into the labour market. However, education systems increasingly offer pathways that allow students to move between tracks, so that early choices do not necessarily limit future educational or career opportunities. Ensuring that students are well informed about the structure and implications of different educational pathways is crucial to supporting successful transitions and minimising the risk of students dropping out.

As well as upper secondary education, some countries offer post-secondary non-tertiary programmes, which provide advanced vocational qualifications or alternative pathways into further education. These programmes are distinct from upper secondary programmes as they usually require prior completion of secondary education and offer more specialised content.

After completing upper secondary education, students can choose among several options: entering the labour market, continuing into further education or taking a gap year. Taking a gap year can bring benefits such as greater maturity, clearer academic goals and improved academic performance upon entering tertiary education. However, it can also present risks, particularly for students from vocational tracks who may face stronger financial pressures or lose academic momentum.

Figure B3.1. Distribution of students enrolled in upper secondary vocational education, by type of programme (2023)

In per cent



For data, see Table B3.2. For a link to download the data, see Tables and Notes section.

Other findings

- Despite the benefits of work-based learning, its use in vocational programmes varies widely. In some countries, work-based learning is widespread, with 90% or more of students enrolled in combined school- and work-based programmes, mostly through apprenticeships.
- Across OECD countries, female students enrolled in vocational upper secondary programmes are, on average, two years older than their male counterparts (22 years compared to 20). The gender age gap exceeds four years in Denmark, Estonia, Finland, Iceland, New Zealand, Spain and Sweden, indicating significant gender differences in the timing of enrolment.
- Vocational programmes dominate provision at the post-secondary non-tertiary level across almost all OECD countries. In systems offering programmes at this level, vocational pathways account for a large majority of enrolments, often exceeding 80%.
- Across OECD countries, 44% of new tertiary entrants had taken a gap of at least a year after completing upper secondary education, with the rate higher among graduates from vocational programmes. While 42% of general track students delayed entry, 58% of vocational track students did so.

Analysis

Upper secondary education differs from earlier levels of education, as it offers students more varied, specialised and in-depth instruction and content. It typically lasts three years, but the duration ranges from two years (as in Australia, Colombia, Costa Rica, Ireland, Lithuania and Peru) to five years (as in Bulgaria and Italy). The typical starting age is 15, but in some countries, students start earlier, at age 14 (as in Austria, Belgium, Bulgaria, Chile, Hungary, India, Italy, the Republic of Türkiye and United Kingdom), or far later, at 17 (as in Lithuania). Although students complete upper secondary education at the age of 17 or 18 in most countries, they do so at 16 in Colombia, Costa Rica and Peru and at the age of 19 in Iceland (Annex Table X1.3).

Participation of 15-19 year-olds in education

Enrolment patterns among 15-19 year-olds vary considerably across countries, both in terms of overall enrolment rates and the level at which students are studying. The average enrolment rate across OECD countries is 84% – and in seven OECD and partner countries, at least nine out of ten teenagers in this age group are enrolled in education. However, at the other end of the spectrum, there are five countries where less than two-thirds of 15-19 year-olds are in education (Figure B3.2).

The level at which 15-19 year-olds are enrolled reflects the different structures of national education systems. Students in this age group might be pursuing lower secondary, upper secondary, post-secondary non-tertiary or tertiary education, although the majority are enrolled in upper secondary education. Enrolment in lower secondary education is also relatively common in Australia, Denmark, Estonia, Germany, Lithuania and South Africa, where over one-quarter of 15-19 year-olds are studying at this level (Figure B3.2).

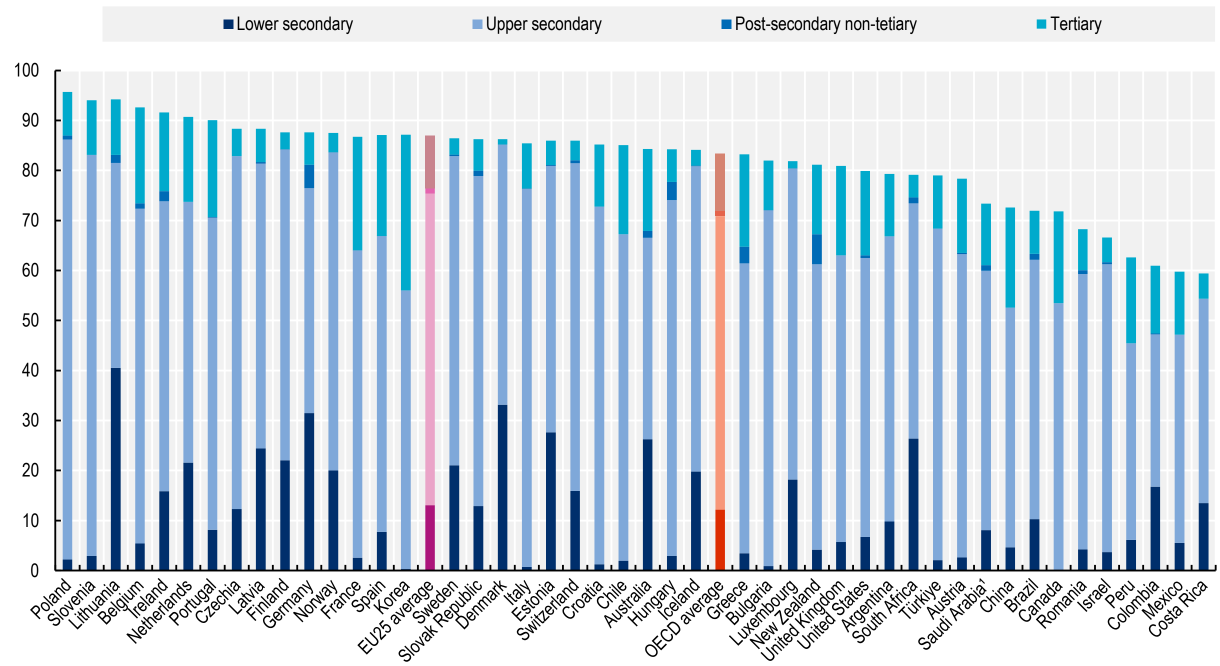
In 13 OECD and partner countries, vocational programmes account for the largest share of upper secondary enrolment among 15-19 year-olds. In these countries, VET is the main initial upper secondary education pathway. In contrast, the very small share of vocational upper secondary students in this age group in New Zealand reflects the fact that vocational education is delivered outside the initial education system. Students typically complete general upper secondary education and then might pursue a vocational programme at upper secondary level, as an alternative to post-secondary or tertiary education (Table B3.1).

Mainly vocationally oriented, post-secondary non-tertiary programmes are relatively less common among OECD countries than other levels of education. About 1% of 15-19 year-olds were enrolled in post-secondary non-tertiary education in 2023 on average, with 11 OECD and partner countries not offering this level of education at all. In New Zealand, which has the highest share of this age group studying at this level (6%), post-secondary non-tertiary education consists of apprenticeships where some off-the-job learning is offered to students (Table B3.1).

Enrolment in tertiary education is limited among this age group: it accounts for only 11% of 15-19 year-olds on average across OECD countries. However, rates do vary significantly, ranging from 1% in Denmark and Luxembourg to 31% in Korea, where enrolment in tertiary programmes typically starts at an earlier age (Table B3.1) and a large majority of young adults attain a tertiary qualification (see Chapter A1).

Figure B3.2. Enrolment rates of 15-19 year-olds, by level of education (2023)

In per cent



1. Year of reference differs from 2023.
For data, see Table B3.1. For a link to download the data, see Tables and Notes section.

Profile of upper secondary students

General programmes

General programmes at the upper secondary level are primarily designed to prepare students for tertiary education, emphasising theoretical knowledge across a broad range of academic subjects. These programmes typically do not include vocational training components and are structured to facilitate progression to higher education.

Gender and average age

In 2023, on average across OECD countries, 54% of students enrolled in general upper secondary programmes were female, indicating a higher participation rate among women in these academically oriented tracks. Among OECD and partner countries, this trend is particularly pronounced in Croatia, Italy, Poland and Slovenia, where women constitute over 60% of enrolments. At the other end of the scale, in Israel and the United States, the gender distribution is in favour of men, with women making up only 47% of students (Table B3.2).

Across OECD countries, the average age of students enrolled in general upper secondary programmes is approximately 17 years for both women and men, indicating minimal gender differences in age at this educational level. However, in a few countries, there are notable differences. In Belgium, Costa Rica and Sweden, the average age of female students exceeds that of male students by more than one year. These three countries, along with Iceland and Türkiye, also have a higher average age of all students at this level – over 19 years for both male and female students except in Belgium, where the average age of male students is slightly below 19. Older average ages in these countries could be explained by the enrolment of adults pursuing upper secondary general qualifications through dedicated programmes, such as the *Académica Nocturna* (*Evening Academic Programme*) in Costa Rica, the *Secundair volwassenenonderwijs* (*Secondary Adult Education*) in the Flemish Community of Belgium, the *Komvux*

(Municipal adult education) in Sweden and the *Açıköğretim Lisesi* (Open High School) in Türkiye. These types of programmes tend to attract a higher share of women than men, as men without qualifications are generally less disadvantaged in the labour market than women, both in terms of employment prospects and earnings (Table B3.2).

Access to higher levels of education

The type of completion offered by general upper secondary programmes plays a crucial role in shaping students' educational and professional opportunities. Across OECD countries, the vast majority of students enrolled in general upper secondary education – 91% on average – attend programmes that lead to full level completion and grant access to tertiary education. These programmes are designed to provide students with a comprehensive academic foundation and a qualification formally recognised for entry into higher education. In contrast, a notable share of students – 8% on average – are enrolled in programmes that result in partial completion or provide insufficient credits for full upper secondary completion, and 1% are enrolled in programmes giving full level completion without access to tertiary education (Table B3.2).

Several general programmes classified as offering insufficient level completion share similar characteristics across countries. The category "insufficient for level completion" refers to programmes that are too short to meet the requirements for full or partial level completion (OECD/Eurostat/UNESCO Institute for Statistics, 2015[1]). These programmes provide students with a recognised certificate or diploma after the first phase of upper secondary education but do not grant full completion nor eligibility for direct entry into tertiary education. Students holding such certificates can generally continue their education either by entering more advanced general academic programmes or by transitioning to vocational education and training. However, the initial qualification alone does not provide eligibility for direct entry into tertiary education (see the *Definitions* section for a more detailed explanation of these different types of completion).

In particular, six countries stand out with more than 40% of students enrolled in programmes leading to partial or insufficient completion: Belgium, Bulgaria, Chile, Peru, Spain and the United Kingdom (Table B3.2). In these countries, upper secondary education is often structured in two or more stages: students typically complete an initial phase that awards them a qualification and may pursue further learning opportunities afterwards. Those who wish to access tertiary education must continue to gain full completion of upper secondary education and comply with the necessary academic requirements for higher education entry. This structure contributes to the higher share of students temporarily recorded as completing only part of upper secondary education. In the Flemish Community of Belgium, this high share also reflects the structure of upper secondary education, which is divided into several stages. Many students are still in an intermediate stage (*tweede graad*) that does not yet lead to a qualification giving access to higher education, although most of them continue to the final stage (*derde graad*). n the French Community of Belgium, students are awarded the *Certificat d'Études du Deuxième Degré* (CE2D) upon completion of the second degree of secondary education (after the fourth year). While the CE2D certifies the acquisition of basic competencies, it does not confer full upper secondary graduation nor direct access to tertiary education pathways. In Spain, students complete the *Educación Secundaria Obligatoria – Segundo ciclo (4° curso)* at the end of compulsory education; however, further studies in general's or vocational tracks are required to qualify for tertiary education entry. In the United Kingdom, students typically obtain the General Certificate of Secondary Education (GCSE) around the age of 16. The GCSE marks the completion of lower secondary education. To access tertiary education, students must obtain further qualifications, such as A-levels or equivalent vocational programmes. In Chile, the *Ciclo General de Enseñanza Media* represents the general cycle within upper secondary education; however, students must complete an additional cycle of specialisation to achieve full secondary graduation. Similarly, in Bulgaria, students complete the First High School Stage of General and Profiled Secondary Education after grade 10, which certifies partial completion of upper secondary education but requires progression to a second stage to obtain a full diploma.

Ensuring that students successfully complete upper secondary programmes with eligibility for tertiary education remains a key priority for education systems. Policy makers should pay particular attention to supporting students in transitional phases, strengthening guidance mechanisms and offering flexible pathways that allow for the continuation of studies without unnecessary barriers. Facilitating smoother progression from partial qualifications to full upper secondary completion can help improve overall educational attainment and equity in access to tertiary education.

Vocational programmes

Vocational education and training programmes represent an important pathway at the upper secondary level, offering students practical skills and preparing them for entry into the labour market. In 2023, on average across OECD countries, 44% of upper secondary students were enrolled in vocational programmes. Participation in VET is particularly prominent in some countries, with more than two-thirds of upper secondary students following vocational tracks in Austria, Croatia, Czechia, Finland, the Netherlands, the Slovak Republic and Slovenia. Overall, the share of students enrolled in vocational programmes has remained relatively stable across OECD countries since 2013. However, notable national trends have emerged. In Hungary, the proportion of students enrolled in VET programmes has doubled over the past decade and now represents more than half of the upper secondary cohort. Part of this increase is due to the reclassification of some general programmes as vocational, but a significant share is also attributable to a genuine rise in the number of students choosing vocational pathways. Similarly, Brazil has recorded significant growth in VET enrolment, although the share was still only 14% in 2023, well below the OECD average. This increase is linked to recent reforms aimed at expanding access by making vocational education an optional component of upper secondary programmes and allowing more flexible, locally adapted programmes. However, progress has varied across states and municipalities (OECD, 2023[2]). Conversely, some countries have experienced declines in the share of vocational students: in Sweden, for instance, the proportion of students enrolled in VET programmes has fallen from 47% to 37% over the past ten years (Table B3.2). This decline is partly due to the reclassification of some programmes, such as media studies, from vocational to academic. More selective entry into higher education and the removal of automatic eligibility from VET programmes to higher education introduced by the 2011 reform may also have discouraged students - particularly high achievers - from choosing this track (Kuczera and Jeon, 2019[3]). However, a reform implemented in autumn 2023 reinstated automatic access for vocational graduates: all national VET programmes were expanded to include core courses in Swedish and English, providing *grundläggande behörighet* -the basic eligibility required for tertiary education - without needing additional elective courses (The Swedish Parliament, 2022[4]).

Gender and average age

In 2023, on average across OECD countries, 45% of students enrolled in vocational upper secondary programmes were female, indicating lower female participation than in general programmes. This trend is particularly pronounced in countries such as Germany, Iceland, India and Lithuania, where women account for 35% or less of enrolments. In Saudi Arabia, the Technical and Vocational Training Corporation (TVTC) offers upper secondary industrial programmes that are almost exclusively reserved for men, reflecting very limited female participation. Conversely, a few OECD and partner countries, including Brazil, Ireland and New Zealand, report a significantly higher share of women than men in VET programmes (Table B3.2).

Gender differences are also reflected in the average age of students. Across OECD countries, female students enrolled in vocational programmes are, on average, about two years older than their male counterparts (22 years old compared to 20). In several countries, the difference is particularly large: in Denmark, Estonia, Finland, Iceland, New Zealand, Spain and Sweden, the average age of female students exceeds that of male students by more than four years. These patterns may reflect the participation of older women returning to education through adult VET programmes or differences in pathways between general and vocational education streams (Table B3.2).

Access to higher levels of education

Vocational upper secondary programmes aim to prepare students for entry into the labour market by providing them with practical skills and occupation-specific knowledge. At the same time, it is important to ensure that vocational programmes, particularly those at upper secondary level, also allow for progression to higher levels of education. This matters for the attractiveness of VET, as without such opportunities, bright young people will not consider VET as an option. It also matters for equity, as nobody should be locked out of further learning because of a choice made in initial schooling. It also encourages lifelong learning, as access to tertiary education can allow VET graduates to upskill or reskill later in their careers. However, progression opportunities must be paired with adequate preparation. To succeed in tertiary education, students need the academic and transversal skills necessary to complete their programmes. Without this, formal access may not translate into successful outcomes. This issue is further discussed in the section on tertiary completion rates below. Countries have taken different approaches to structuring upper secondary education and VET, as well as associated progression opportunities.

Most vocational students are enrolled in programmes providing direct access to tertiary education. In 2023, 77% of upper secondary vocational students were enrolled under such arrangements (Figure B3.1). Within this broad category there are some nuances in access arrangements. In many countries, VET graduates are eligible for any type of tertiary programme, subject to the same selection processes that apply to general upper secondary graduates. In some countries, however, there are distinct progression routes for VET graduates. For example, they may only have access to short-cycle tertiary programmes, which are typically viewed as part of higher VET. This is the case for example in Austria, where graduates of three-year vocational programmes (in higher technical colleges) may progress to short-cycle tertiary programmes within the same institutions. Similarly, graduates of upper secondary VET in Norway and Spain have direct access to higher vocational programmes but not to universities. In some countries, VET graduates have access to some, but not all bachelor's level programmes. For example, in the Netherlands and Slovenia they have direct access to professional bachelor's programmes, but not academic ones (Kis, forthcoming[5]).

Most countries have at least one upper secondary vocational programme that leads to full level completion without direct access to tertiary education. This category refers to programmes that meet the requirements for graduates to be considered "upper secondary graduates" but the qualification obtained does not make them eligible for any type of tertiary education. Such programmes represent a very high share of vocational upper secondary enrolment in countries where vocational programmes tend to build on completed initial schooling and commonly enrol adults. For example, in Ireland and New Zealand the average age of upper secondary VET students is 30 or over. Enrolment in such programmes is also relatively high in countries with multiple vocational tracks at upper secondary level, such as Hungary, the Netherlands and Slovenia. In these countries, one vocational track has stronger emphasis on general skills and preparation for higher level studies and gives direct access to tertiary education. Another track focuses on occupational preparation and its graduates do not have direct access to tertiary education.

Some OECD countries and economies have vocational programmes that do not lead to full completion of upper secondary education. These categories do not mean that students do not complete their studies or only complete some study at these levels. These programmes lead to a recognised qualification but are not the final programme in a sequence of programmes. This is the case for more than one-third of students in Belgium, Bulgaria, Estonia and the United Kingdom. In the Flemish Community of Belgium partial completion programmes include the second stage of technical or vocational secondary education which is connected to a third stage leading to full level completion. In Estonia, in contrast, programmes in this category target adults and, unlike vocational programmes for youth at the same level, include limited general education and are deliberately focused on occupational skills (Table B3.2).

Use of work-based learning

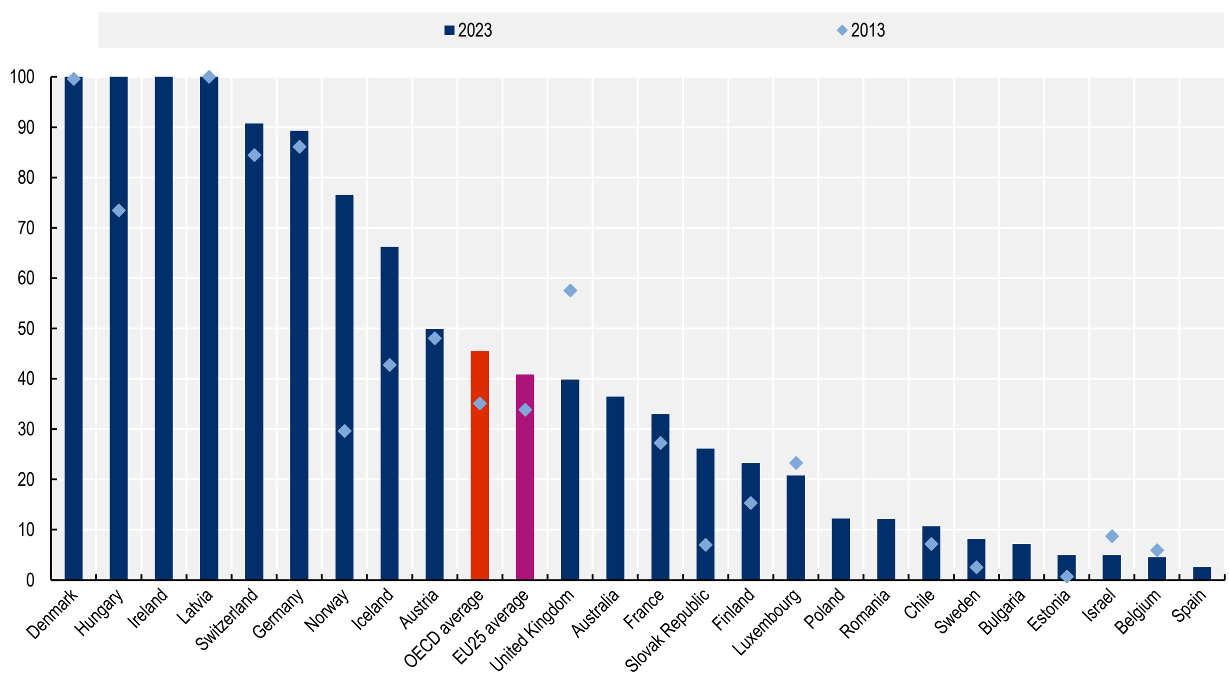
Including an element of work-based learning in vocational programmes has multiple benefits. Workplaces are powerful environments for the acquisition of both technical and soft skills. Students can learn from experienced colleagues, on the equipment and technology that is currently used in their field. Soft skills like conflict management are easier to develop in real life contexts than in classroom settings. Delivering practical training in work environments can reduce the cost of training in schools, as equipment is often costly and quickly becomes obsolete. Similarly, including a strong element of work-based learning in VET can help tackle teacher shortages if students are learning from experienced skilled workers in companies. Finally, work-based learning creates a link between schools and the world of work, as well as between students and potential employers (OECD, 2018[6]).

Despite the recognised benefits of work-based learning, its use in vocational programmes varies widely. In Denmark, Hungary, Ireland, Latvia and Switzerland, work-based learning is widespread, with 90% or more of students enrolled in combined school- and work-based programmes, mostly through apprenticeships. However, work-based learning opportunities remain limited in 11 OECD and partner countries, where less than 25% of vocational students are enrolled in such programmes. Over the past decade, the share of students enrolled in combined school- and work-based programmes has increased in many countries, with particularly significant growth in some. In Norway, for instance, the share of students enrolled in such programmes more than doubled, rising from less than one-third of all vocational students in 2013 to over two-thirds in 2023 (Figure B3.3).

The types of programmes offered vary across countries: in total, 11 OECD countries and 4 partner countries do not offer combined school- and work-based programmes at all. In several countries, they co-exist with school-based options. In some of them this reflects the existence of alternative routes to the same qualification. In France, for example, upper secondary vocational qualifications may be acquired either through apprenticeships or through a school-based route with a smaller work-based learning component. In some other countries, apprenticeships and school-based programmes lead to different qualifications. In Austria, for example, upper secondary vocational programmes include both apprenticeships and programmes in higher technical and vocational colleges.

Figure B3.3. Trends in the share of upper secondary vocational students enrolled in combined school- and work-based programmes (2013 and 2023)

In per cent



For data, see Table B3.2. For a link to download the data, see Tables and Notes section.

Profile of post-secondary non-tertiary students

Programmes at the post-secondary non-tertiary level occupy a unique position within education systems, sitting between upper secondary and tertiary education. They are often designed either to provide further specialisation after the completion of upper secondary education or to offer alternative pathways to employment or tertiary studies. Across OECD countries, post-secondary non-tertiary programmes remain relatively less common than upper secondary or tertiary ones, and their organisation, purpose and target population vary considerably from one country to another.

General programmes

Across OECD countries, a limited number of general education programmes are classified at the post-secondary non-tertiary level. They are found in the Flemish Community of Belgium, Colombia, Czechia, France, Germany, Iceland, Israel, Japan, New Zealand, Sweden and Switzerland and typically serve as a bridge between upper secondary education and tertiary education or specialised vocational training. In general, these programmes are accessible to students who have successfully completed an upper secondary education programme but seek to either deepen their general education or meet specific admission requirements for tertiary education. They are often used to consolidate academic skills, fulfil prerequisites not covered during secondary education, or to provide additional orientation before choosing a specialised field of study. In most countries, they can provide a route into tertiary education from vocational upper secondary programmes.

The typical duration of post-secondary non-tertiary general programmes is around one year. Examples include the *Passerelle* programme in Switzerland, *Enseignement pré-universitaire* in France and *Mechina Kdam- akademit* (Pre-academic preparatory programme) or *handasaim (Associate engineering studies)* in Israel. In Germany, various *Fachoberschule* and *Berufsoberschule/Technische Oberschule* pathways offer additional qualification options beyond secondary education. Graduates of these programmes in Germany are entitled to enter first degree studies at Fachhochschulen and universities. While general programmes are not as widespread as vocational programmes, they play an important role in facilitating smoother transitions to tertiary education for students who may not yet meet all academic requirements, or who wish to enhance their academic profile. Their relatively short duration and focused curriculum make them an efficient tool for addressing gaps in academic knowledge, supporting lifelong learning and promoting access to higher education.

Women account for the majority of students enrolled in general programmes at this level, although their share varies significantly between countries. On average across OECD countries, women represent 58% of enrolments in general post-secondary non-tertiary programmes. Students enrolled in these programmes tend to be relatively old compared to those in other education levels: the average age is 29 years for both men and women. However, age patterns vary significantly across countries, ranging from 22 years in Colombia and Switzerland to nearly 50 years in Belgium. In Belgium, the high average age is largely due to the fact that the majority of students enrolled at this level are in adult education programmes. Most students in general programmes at this level complete qualifications that are equivalent to those providing access to tertiary education, often serving as alternative pathways to tertiary entrance examinations (Table B3.3).

Vocational programmes

Vocational programmes at the post-secondary non-tertiary level are far more widespread than general ones. These programmes cater not only to recent graduates from upper secondary education but also to adults already in the labour market who wish to deepen their vocational skills and knowledge. Participants in these programmes often view them as direct pathways into the labour market or as preparation for further tertiary education. Typically, the duration of post-secondary non-tertiary vocational programmes ranges from six months to three years, depending on the country and field of study.

In most cases, access to these programmes requires the successful completion of an upper secondary education programme. Students entering these programmes have already acquired a broad base of general or vocational education and are looking to specialise further, improve their employability or obtain additional qualifications recognised on the labour market. However, entry requirements vary across countries and in some cases, students who have only completed lower secondary education can enrol in upper secondary programmes. This is the case, for example, in Germany, where Full-time Vocational Schools (*Berufsfachschulen*) and Specialised Upper Secondary Schools (*Fachgymnasien*) offer both access to tertiary education and a vocational qualification, these qualifications combined lead to an allocation to post-secondary non-tertiary education. In Austria, this was possible in programmes such as the School for Health and Nursing (*Schule für Gesundheits- und Krankenpflege*), although this pathway is currently being phased out. These pathways offer young people early specialisation opportunities and help individuals of all ages bridge the gap between initial education and professional careers.

While many post-secondary non-tertiary programmes offer a bridge to tertiary education, not all of them provide access to higher levels of learning. The Framework Programme for Initial Vocational Training (*Рамкови програми*) in Bulgaria, the Entrepreneurship Training Programme (*Ondernemersopleiding*) in the Flemish Community of Belgium, 2 and 3 years programmes in Health and Social Professions (*Zwei- und dreijährige Programme in Gesundheits- und Sozialberufen)*) in Germany, and the Post-secondary School *(Szkoła policealna*) in Poland, are primarily oriented towards preparing students for direct entry into the labour market without offering a formal pathway to tertiary education.

Vocational programmes dominate provision at the post-secondary non-tertiary level across almost all OECD countries. In systems offering programmes at this level, vocational pathways account for a large majority of enrolments, 92% on average across OECD countries, and 100% in 18 of them. Women tend to be under-represented in vocational post-secondary non-tertiary programmes compared to general education, reflecting gender differences in fields of study. Work-based learning opportunities are a significant feature of vocational programmes at this level in many countries. On average across OECD countries, 42% of students are enrolled in programmes that combine school-based learning with structured work placements, although participation rates vary considerably across countries. Nevertheless, there has been no consistent increase in the share of students enrolled in work-based learning over time. In Austria, for example, the proportion of students in such programmes fell sharply from 61% in 2013 to 28% in 2023, whereas in Sweden, the share grew substantially over the same period, from 61% to 96%. These contrasting trends highlight the varying dynamics of work-based learning across countries. Caution is warranted in interpreting these changes, as the absolute number of students enrolled in work-based learning programmes often remains relatively small, making the share sensitive to short-term fluctuations. Ensuring the sustainability and attractiveness of work-based learning pathways remains a key policy challenge in many systems (Table B3.3).

Students in vocational post-secondary non-tertiary programmes tend to be older than those in general ones. On average, the women enrolled in vocational programmes are 32 years old, compared to 30 years old for men. Germany and South Africa have the youngest students, with an average age of 23 years, while Finland and Spain have the oldest students, with an average age of around 40 years. These differences reflect the specific nature of vocational programmes in some countries, where provision is targeted towards particular groups rather than the general student population. For example, in Spain, Professional Certificates, Level 3 (*Certificados de Profesionalidad de nivel 3*) are often designed for adults seeking to upskill or reskill, while in Finland, the Specialist Vocational Qualification (*Erikoisammattitutkinto*) caters to experienced professionals aiming to further specialise in their fields. Programmes like these contribute to raising the average age of students enrolled in vocational education (Table B3.3).

Taking time between school and tertiary studies

Taking time between upper secondary and tertiary education is a widespread practice in many OECD and partner countries and economies, although its prevalence varies considerably. In Brazil, Finland, Israel and Sweden, more than 70% of new entrants into bachelor’s programmes took a gap of at least a year or more before starting their tertiary studies. In contrast, in the Flemish and French Communities of Belgium and the Netherlands, the share is 15% or less (Figure B3.4). These differences reflect a range of factors, including national admission systems, labour-market structures, cultural norms regarding transitions into adulthood and the availability of alternative learning or work opportunities between educational levels. In some countries, the duration of the transition between upper secondary and tertiary education is influenced by structural and policy factors beyond students’ choices. In Austria, Finland, Israel, Korea, Lithuania and Switzerland military or civil service – usually required of young men – commonly delays the start of tertiary education.

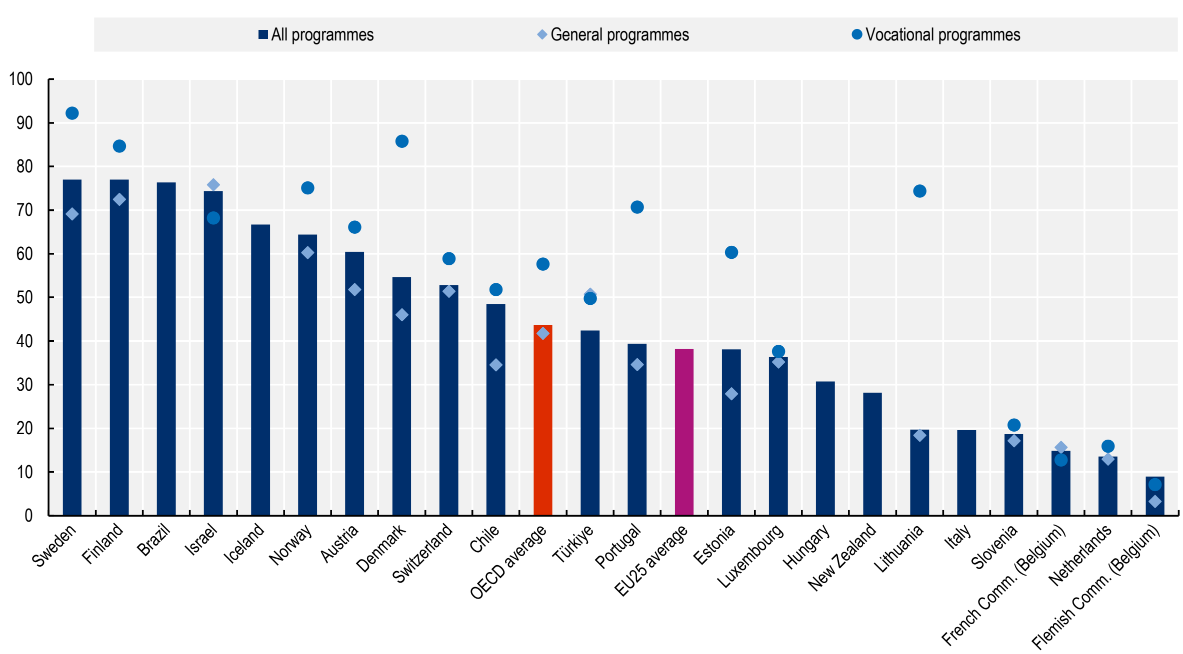
On average across OECD countries and economies, 44% of new tertiary entrants had delayed their entry by a year or more after finishing school, but this rate is notably higher among students who graduated from vocational upper secondary programmes. While 42% of students from general tracks delayed their entry into tertiary education, the share reaches 58% among those from vocational tracks. This suggests that students in vocational education may be more likely to gain work experience, complete additional qualifications or pursue other transitional activities before continuing their studies. In Denmark, Lithuania and Portugal, the difference between vocational and general programme graduates exceeds 35 percentage points (Figure B3.4).

Taking time between upper secondary and tertiary education can yield positive academic and personal outcomes when the gap is well-structured and supported. Evidence suggests that students who delay their entry into tertiary education often outperform their peers who transition directly, particularly among those with weaker academic performance at the end of upper secondary education (Gap Year Association, 2023[7]). Some OECD and partner countries have introduced innovative or compensatory programmes to support meaningful transitions during this period. In Luxembourg, *the Diplom+ programme* helps recent graduates gain skills and improve their employability or academic preparedness during this period (Government of Luxembourg, 2024[8]). In Peru, targeted scholarships and social support schemes like *Beca 18* help vulnerable students transition into tertiary education (PRONABEC, 2025[9])These examples suggest that well-designed transition mechanisms – particularly for students from disadvantaged backgrounds – can mitigate the risks associated with long or unstructured time gaps, improving access, equity and student success at the tertiary level.

Extended transitions between upper secondary and tertiary education may also carry academic and financial costs. Long breaks can disrupt academic momentum and make it more challenging for students to reintegrate into structured learning environments. Extended gaps may also increase demands on public support systems, as individuals may require financial aid or unemployment benefits during this period. For governments, delayed entry into tertiary education can reduce the flow of skilled individuals into the labour market. Some countries have implemented policies to limit the length of the transition. In Norway, for example, regulations incentivise students to enter tertiary education within three years of completing upper secondary education, with 50% of study places reserved for applicants under the age of 21 (Sandsør, Hovdhaugen and Bøckmann, 2021[10]). In Denmark, similar incentives were in place from 2009 to 2019 to encourage students to limit gap years to no more than two years, although this policy has since been discontinued (Government of Denmark, 2016[11]).

Figure B3.4. Share of tertiary new entrants into bachelor's programmes who took at least one gap year, by upper secondary programme orientation (2023)

In per cent



For data, see Table B3.4 (on line). For a link to download the data, see Tables and Notes section.

Tertiary completion rates by upper secondary programme orientation

Creating strong pathways from upper secondary into tertiary education requires building suitable access routes and ensuring that students are well prepared for further studies. By definition, general upper secondary programmes are designed to equip students with the skills needed for post-secondary and tertiary education, but vocational programmes can vary in their emphasis on preparation for further studies. Some vocational graduates may be left poorly prepared to complete a tertiary programme. On the other hand, VET graduates may have an advantage over their peers from general education: when pursuing studies within the same field as their vocational qualification and where they might have relevant work experience, they could be particularly well prepared and motivated to succeed in their studies.

Completion rates within the theoretical duration of bachelor's programmes remain low across most countries and with marked differences by upper secondary programme orientation. On average across countries and economies with available data, 42% of students who entered a bachelor's programme from a general upper secondary track completed it within the theoretical duration, compared to 39% of those from a vocational upper secondary track. In most systems, students from vocational programmes are less likely to complete on time. The gap is particularly large in France (36% compared to 5%), the French Community of Belgium (28% compared to 14%) and Slovenia (53% compared to 29%), suggesting that students from vocational pathways may face greater difficulties adjusting to the academic demands of tertiary education. Only a small number of countries – Denmark, Israel, Norway and Türkiye) – report completion rates of above 50% for both groups within the expected timeframe (Figure B3.5).

When allowing an additional three years beyond the theoretical duration, overall completion rates improve significantly, although differences by programme orientation persist. The OECD average completion rate rises to 71% for students from general programmes and in many countries and economies, the gap narrows considerably with the extended time window. However, in the French Community of Belgium, completion remains comparatively low even after three additional years, especially among students from vocational pathways (36%). These findings underline the importance of flexible study pathways and adequate academic support, particularly for students whose prior preparation may not fully align with the requirements of tertiary education (Figure B3.5).

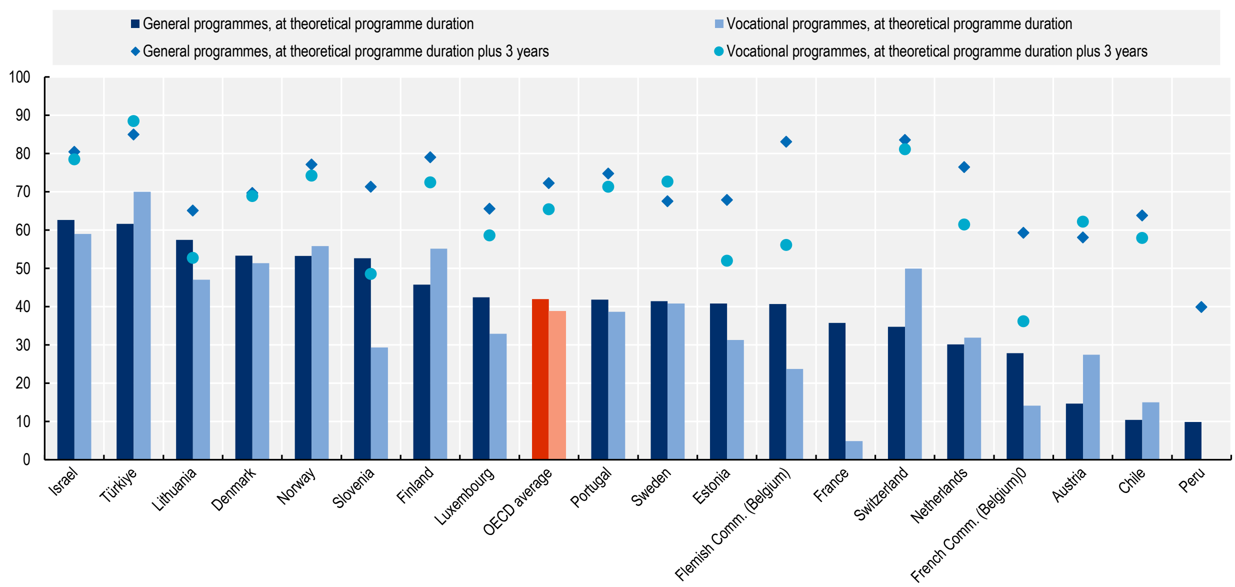
One important piece of context is the share of bachelor's students who have a vocational background. For example, in Lithuania, 47% of students from vocational upper secondary programmes graduate within the theoretical duration of the programme in which they entered. However, these students represent only around 1% of entrants into bachelor's programmes. A number of factors may explain the low share of VET graduates among bachelor's students. In some countries, such as Norway, only general upper secondary programmes grant direct access to bachelor's or equivalent programmes, with few exceptions. In Estonia, upper secondary vocational programmes can grant access to higher education, but admission to bachelor's programmes often requires results from national examinations, which are mandatory in general education but not in vocational education. As a result, access may be more limited in practice for vocational graduates, depending on the specific admission criteria set by tertiary education institutions. The data also refer to full-time students, so do not fully capture participation patterns in countries where VET graduates commonly pursue bachelor's programmes part-time (Table B3.5, available on line).

In Austria, in contrast, a large share of bachelor's level students have a vocational background and their completion rates are higher than for those with general upper secondary education (Table B3.5, available on line). This reflects Austria's large upper secondary VET system, which offers a strong progression pathway from upper secondary education (year 1-3 of *Berufsbildende Höhere Schulen*, BHS) into short-cycle tertiary programmes (year 4-5 of BHS) and universities of applied sciences, as well as to other universities albeit to a lesser extent.

Delays in completion also increase the financial burden for both students and public budgets. Each additional year spent in tertiary education entails higher public expenditure, particularly in countries where tuition fees are low and public subsidies are high. Students from vocational tracks are more likely to combine work and study, and to be sensitive to financial pressures, which can increase their risk of dropping out if their studies extend too far beyond the theoretical timeline. Policies that improve guidance, better match students to appropriate tertiary programmes and expand the availability of professionally oriented tertiary options can contribute to more efficient study pathways and greater equity in tertiary education outcomes. To address this, France has introduced quotas for students from vocational tracks in advanced technicians programmes, ensuring better access to tertiary pathways adapted to their needs and increasing their chances of timely completion (Government of France, 2024[12]).

Figure B3.5. Completion rates of students who entered a bachelor's programme, by time frame and students' upper secondary programme orientation (2023)

In per cent



For data, see Table B3.5 (on line). For a link to download the data, see Tables and Notes section.

Definitions

The data in this indicator cover formal education programmes that represent at least the equivalent of one semester (or half of a school/academic year) of full-time study and take place entirely in educational institutions or are delivered as combined school- and work-based programmes.

General education programmes are designed to develop learners' general knowledge, skills and competencies, often to prepare them for other general or vocational education programmes at the same or a higher education level. General education does not prepare people for employment in a particular occupation, trade, or class of occupation or trade**.**

Vocational education and training (VET) programmes prepare participants for direct entry into specific occupations without further training. Successful completion of such programmes leads to a vocational or technical qualification that is relevant to the labour market.

Full completion (of ISCED level 3) without direct access to first tertiary programmes at ISCED level 5, 6 or 7: programmes with duration of at least 2 years at ISCED level 3 and that end after at least 11 years cumulative study since the beginning of ISCED level 1. These programmes may be terminal (i.e. not giving direct access to higher levels of education) or give direct access to ISCED level 4 only.

Full completion (of ISCED level 3) with direct access to first tertiary programmes at ISCED level 5, 6 or 7: any programmes that give direct access to first tertiary programmes at ISCED level

Partial level completion refers to programmes representing at least 2 years at ISCED level 3 and a cumulative duration of at least 11 years since the beginning of ISCED level 1, and which are part of a sequence of programmes at ISCED level 3 but are not the last programme in the sequence.

Insufficient for level completion refers to programmes that do not meet the duration requirements for partial or full level completion and therefore result in an educational attainment at the level below the level of the programme. This category includes short, terminal programmes (or a sequence of programmes) with a duration of less than 2 years at ISCED level 3 or which end after less than 11 years of cumulative duration since the beginning of ISCED level 1.

Full-time students in the indicator on gap year or completion rates refer to students who entered the given tertiary programme with full-time status. They may have switched status during their studies.

The theoretical duration of programmes is the regulatory or common-practice time it takes a full-time student to complete a level of education.

Gap year refers to a break, typically lasting up to at least one year, taken by students between the completion of upper secondary education and the start of tertiary education.

Methodology

Except where otherwise noted, figures are based on headcounts, because it is difficult for some countries to quantify part-time study. Net enrolment rates are calculated by dividing the number of students of a particular age group enrolled in all levels of education by the size of the population of that age group. While enrolment and population figures refer to the same period in most cases, mismatches may occur due to data availability in some countries, resulting in enrolment rates exceeding 100%.

For more information see the OECD Handbook for Internationally Comparative Education Statistics (OECD, 2018[13]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Source

Data on enrolment refer to the 2022/23 academic year and are based on the UNESCO-Institute of Statistics (UIS)/OECD/Eurostat data collection on education statistics administered by the OECD in 2024. Data for some countries may have a different reference year. For more information see Education at a Glance 2025 Sources, Methodologies and Technical Notes (https://doi.org/10.1787/fcfaf2d1-en).

The UNESCO Institute of Statistics (UIS) provided data for Argentina, China, India, Indonesia, Saudi Arabia and South Africa.

Data on completion rates refer to the academic year 2022/2023 and were collected through a special survey undertaken in 2024. Data for some countries may have a different reference year, please refer to *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

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Tables and Notes

Chapter B3 Tables

Table B3.1	Enrolment rates of 15-19 year-olds, by level of education (2023)
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WEB Table B3.4	*Share of full-time students who entered a bachelor's programme who took at least one gap year, by upper secondary programme orientation and gender (2023)*
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StatLink https://stat.link/845hpj

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table B3.1. Enrolment rates of 15-19 year-olds, by level of education (2023)

1. Year of reference differs from 2013: 2014 for Croatia and Estonia.
2. Year of reference differs from 2023: 2022 for Indonesia and Saudi Arabia.

Table B3.2. Profile of upper secondary students (2023)

1. Year of reference differs from 2023: 2022 for Argentina and Saudi Arabia.
2. Year of reference differs from 2013: 2014 for Croatia; and 2015 for South Africa.

Table B3.3. Profile of post-secondary non-tertiary students (2023)

1. Year of reference differs from 2013: 2014 for China; and 2015 for Spain.
2. Year of reference differs from 2023: 2022 for India and Saudi Arabia; and 2021 for China.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table B3.1. Enrolment rates of 15-19 year-olds, by level of education (2023)

	Lower secondary	Upper secondary			Post-secondary non-tertiary			Tertiary	All leverls	
		General programmes	Vocational programmes	All programmes	General programmes	Vocational programmes	All programmes			
	2023	2023	2023	2023	2023	2023	2023	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	26	33	7	40	a	1	1	16	86	84
Austria	3	19	41	61	a	0	0	15	79	78
Belgium	5	31	m	67	0	1	1	19	92	93
Canada	0	52	m	53	m	m	m	18	73	72
Chile	2	52	13	65	a	a	a	18	78	85
Colombia	17	21	9	30	0	a	0	14	m	62
Costa Rica	13	27	14	41	a	a	a	5	m	60
Czechia	12	20	51	71	0	m	m	5	90	88
Denmark	33	42	10	52	a	a	a	1	88	86
Estonia[1]	28	39	15	53	a	0	0	5	90	86
Finland	22	34	28	62	a	0	0	3	86	88
France	3	39	23	61	0	0	0	23	85	87
Germany	31	30	15	45	0	5	5	6	90	88
Greece	3	42	m	58	a	3	3	18	86	83
Hungary	3	35	37	71	a	4	4	7	88	84
Iceland	20	50	11	61	0	0	0	3	88	84
Ireland	16	53	5	58	a	2	2	16	92	92
Israel	4	34	23	58	0	a	0	5	65	67
Italy	1	37	38	76	a	0	0	9	77	86
Japan	0	46	12	58	x(7)	x(7)	0	m	m	m
Korea	0	47	8	56	a	a	a	31	87	87
Latvia	24	33	24	57	a	0	0	7	94	88
Lithuania	41	31	10	41	a	2	2	11	93	94
Luxembourg	18	30	32	62	a	0	0	1	78	82
Mexico	6	26	16	42	a	a	a	13	54	60
Netherlands	22	24	28	52	a	m	m	17	91	91
New Zealand	4	51	6	57	1	5	6	14	82	81
Norway	20	34	29	64	a	0	0	4	87	87
Poland	2	38	46	84	a	1	1	9	90	96
Portugal	8	40	23	62	a	0	0	19	88	90
Slovak Republic	13	22	44	66	a	1	1	6	85	86
Slovenia	3	28	52	80	a	a	a	11	93	95
Spain	8	44	15	59	a	0	0	20	87	87
Sweden	21	41	20	62	0	0	0	3	86	87
Switzerland	16	28	38	66	0	0	1	4	86	86
Türkiye	2	42	24	66	a	a	a	11	69	79
United Kingdom	6	37	20	57	a	a	a	18	81	81
United States	7	56	a	56	a	1	1	17	81	80
OECD average	12	37	23	59	0	1	1	11	84	84
Partner and/or accession countries										
Argentina	10	x(4)	x(4)	57	a	a	a	12	72	79
Brazil	10	45	7	52	a	1	1	9	69	72
Bulgaria	1	33	38	71	a	0	0	10	77	82
China	5	33	15	48	m	m	m	20	m	73
Croatia[1]	1	21	50	72	a	a	a	12	84	85
India	1	31	2	33	a	0	0	m	m	m
Indonesia[2]	m	m	m	m	m	m	m	m	m	m
Peru	6	39	a	39	a	a	a	17	m	63
Romania	4	25	30	55	a	1	1	8	77	68
Saudi Arabia[2]	8	52	0	52	1	1	1	12	85	74
South Africa	26	46	1	47	0	1	1	5	m	82
EU25 average	13	33	29	62	0	1	1	11	87	87
G20 average	9	41	13	54	0	1	1	14	m	79

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B3.2. Profile of upper secondary students (2023)

Percentage of vocational and female students, average age in years, and distribution by type of programme

			General programmes						Vocational programmes							
				Average age		Distribution by type of programme						Average age		Distribution by type of programme		
	Share of vocational students		Share of female students	Women	Men	Programmes giving full level completion with access to tertiary education	Programmes giving full level completion without access to tertiary education	Programmes giving partial completion or insufficient for completion	Share of female students	Share of students enrolled in combined school- and work-based programmes		Women	Men	Programmes giving full level completion with access to tertiary education	Programmes giving full level completion without access to tertiary education	Programmes giving partial completion or insufficient for completion
	2013	2023	2023	2023	2023	2023	2023	2023	2023	2013	2023	2023	2023	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	50	53	51	17	17	100	a	a	44	m	36	32	29	100	a	a
Austria	70	69	56	16	16	84	2	13	44	48	50	18	18	93	2	5
Belgium	60	55	56	20	19	38	18	45	50	6	5	23	19	24	42	34
Canada	8	8	49	17	17	100	a	a	47	m	m	27	24	100	a	a
Chile	31	33	49	17	17	38	a	62	46	7	11	17	17	98	2	a
Colombia	26	28	52	18	18	100	a	a	53	m	m	16	16	100	a	a
Costa Rica	29	33	53	21	19	100	a	a	53	a	a	20	18	100	a	a
Czechia	74	73	59	17	17	97	a	3	45	9	a	18	18	68	32	a
Denmark	43	40	54	19	18	91	a	9	40	100	100	28	24	76	13	11
Estonia	34	39	57	19	18	100	a	a	41	1	5	29	22	56	a	44
Finland	70	68	58	18	18	100	a	a	51	15	23	31	26	100	a	a
France	43	41	54	16	16	100	a	a	42	27	33	19	17	58	42	a
Germany	48	47	53	17	17	100	a	a	35	86	89	21	20	90	5	5
Greece	34	33	53	16	16	100	a	a	37	9	a	17	17	95	5	a
Hungary	26	51	56	19	19	99	1	a	42	73	100	18	19	60	39	1
Iceland	31	32	53	19	19	85	5	9	34	43	66	29	25	66	20	15
Ireland	1	22	50	17	17	66	4	30	62	a	100	33	30	a	100	a
Israel	40	40	47	16	16	87	12	1	51	9	5	16	16	95	5	a
Italy	59	51	61	16	16	100	a	a	36	0	a	18	17	90	10	a
Japan	23	21	50	16	16	100[d]	a	x(6)	42	a	a	16	16	99[d]	1	x(14)
Korea	18	15	49	16	16	100	a	a	41	a	a	16	16	100	a	a
Latvia	39	42	56	18	18	100	a	a	41	100	100	18	18	95	2	2
Lithuania	28	27	52	18	18	98	a	2	35	a	a	21	20	81	a	19
Luxembourg	60	58	54	17	17	100	a	a	47	23	21	20	19	54	46	a
Mexico	39	35	54	17	17	100	a	a	49	a	a	16	16	97	3	a
Netherlands	m	70	52	16	16	100	a	a	52	m	m	26	23	52	48	a
New Zealand	33	34	50	16	16	100	0	a	56	m	m	35	31	a	81	19
Norway	52	53	56	18	18	99	1	0	39	30	77	21	20	92[d]	8	x(14)
Poland	49	53	61	17	17	100	a	a	38	m	12	16	17	79	21	a
Portugal	46	38	54	19	19	100	a	a	42	a	a	21	18	100	a	0
Slovak Republic	68	68	59	17	17	100	a	a	45	7	26	18	18	80	18	2
Slovenia	66	70	62	17	17	100	a	a	44	a	a	19	18	71	29	a
Spain	34	39	52	16	16	59	a	41	48	m	3	29	24	61	30	9
Sweden	47	37	55	22	20	94	a	6	50	3	8	26	21	90	2	8
Switzerland	66	61	57	17	17	87	0	13	41	84	91	19	19	93	7	a
Türkiye	45	35	51	19	20	100	a	a	41	a	m	17	17	99	1	a
United Kingdom	44	37	49	15	15	31	a	69	51	58	40	24	22	63	a	37
United States	a	a	47	16	16	100	a	a	a	a	a	a	a	a	a	a
OECD average	43	44	54	17	17	91	1	8	45	35	45	22	20	77	17	6
Partner and/or accession countries																
Argentina[1]	a	a	51	17	17	m	m	m	a	a	a	a	a	a	a	a
Brazil	8	14	51	18	18	100	a	a	56	a	a	20	19	100	a	a
Bulgaria	52	56	55	16	16	40	a	60	41	a	7	18	17	33	a	67
China	46	40	50	16	16	m	m	m	42	m	m	17	17	m	m	m
Croatia[2]	71	71	64	16	16	100	a	a	45	a	a	16	16	72	28	a
India	3	6	48	15	15	m	m	m	30	m	m	20	19	m	m	m
Indonesia	44	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	a	a	49	16	16	a	46	54	a	a	a	a	a	a	a	a
Romania	60	56	56	18	18	100	a	a	44	m	12	20	19	75	a	25
Saudi Arabia[1]	2	1	49	17	17	m	m	m	0	m	m	a	18	m	m	m
South Africa[2]	12	9	53	18	18	m	m	m	56	m	m	22	22	m	m	m
EU25 average	49	51	56	17	17	91	1	8	44	34	41	22	20	70	21	9
G20 average	30	27	51	17	17	m	m	m	41	m	m	21	20	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B3.3. Profile of post-secondary non-tertiary students (2023)

Percentage of vocational and female students, average age in years, and distribution by type of programme

	Share of vocational students		General programmes						Vocational programmes							
			Share of female students	Average age		Distribution by type of programme			Share of female students	Share of students enrolled in combined school- and work-based programmes		Average age		Distribution by type of programme		
				Women	Men	Programmes giving full level completion with access to tertiary education	Programmes giving full level completion without access to tertiary education	Programmes insufficient for completion				Women	Men	Programmes giving full level completion with access to tertiary education	Programmes giving full level completion without access to tertiary education	Programmes insufficient for completion
	2013	2023	2023	2023	2023	2023	2023	2023	2023	2013	2023	2023	2023	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	100	100	a	a	a	a	a	a	56	m	8	35	34	100	a	a
Austria	100	100	a	a	a	a	a	a	76	61	28	32	31	28	72	a
Belgium	92	93	68	49	50	9	a	91	47	a	0	31	33	44	3	53
Canada	m	m	m	m	m	m	a	a	m	m	m	m	m	a	m	a
Chile	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Colombia	a	a	75	22	22	100	a	a	a	m	a	a	a	a	a	a
Costa Rica	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Czechia	21	24	65	36	34	100	a	a	57	60	a	m	m	50	50	a
Denmark	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Estonia	100	100	a	a	a	a	a	a	75	4	7	34	32	100	a	a
Finland	100	100	a	a	a	a	a	a	60	70	58	43	41	100	a	a
France	51	43	59	29	28	100	a	a	63	a	a	26	26	100	a	a
Germany	90	95	46	23	23	100	a	a	55	54	50	23	23	57	43	a
Greece	m	100	a	a	a	a	a	a	54	m	0	27	24	a	100	a
Hungary	100	100	a	a	a	a	a	a	55	100	100	28	25	100[d]	a	a
Iceland	98	98	48	24	27	a	100	a	29	14	4	33	35	100	0	a
Ireland	100[d]	100	a	a	a	a	a	a	22	m	100	34	25	a	100	a
Israel	a	a	39	23	24	82	6	11	a	a	a	a	a	a	a	a
Italy	100	100	a	a	a	a	a	a	38	m	a	27	25	100	a	a
Japan	m	m	m	m	m	m	a	a	m	a	a	m	m	m	a	a
Korea	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Latvia	100	100	a	a	a	a	a	a	68	100	100	30	26	a	100	a
Lithuania	100	100	a	a	a	a	a	a	54	a	a	28	24	100	a	a
Luxembourg	100	100	a	a	a	a	a	a	19	100	100	31	29	a	100	a
Mexico	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Netherlands	100	100	a	a	a	a	a	a	36	97	a	m	m	100	a	a
New Zealand	m	94	70	32	31	99	0	1	30	m	m	34	28	37	63	0
Norway	100	100	a	a	a	a	a	a	67	a	a	36	34	100	a	a
Poland	100	100	a	a	a	a	a	a	72	a	a	31	28	a	100	a
Portugal	100	100	a	a	a	a	a	a	37	a	a	32	29	100	a	a
Slovak Republic	100	100	a	a	a	a	a	a	61	13	12	32	25	100	a	a
Slovenia	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Spain[1]	100	100	a	a	a	a	a	a	60	0	5	43	42	0	100	a
Sweden	71	76	50	30	26	100	a	a	63	61	96	36	33	2	98	a
Switzerland	0	80	60	22	22	100	a	a	61	100	0	31	27	100	a	a
Türkiye	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
United Kingdom	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
United States	100	100	a	a	a	a	a	a	60	m	m	30	29	100	a	a
OECD average	88	92	58	29	29	79	11	10	53	60	42	32	30	62	36	2
Partner and/or accession countries																
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	100	100	a	a	a	a	a	a	60	a	a	29	29	100	a	a
Bulgaria	100	100	a	a	a	a	a	a	42	a	a	36	35	a	100	a
China[1, 2]	38	75	52	m	m	m	m	m	48	m	m	m	m	m	m	m
Croatia	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
India[2]	100	100	a	a	a	a	a	a	53	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Romania	100	100	a	a	a	a	a	a	71	m	14	30	30	a	100	a
Saudi Arabia[2]	100	33	44	m	m	m	m	m	19	m	m	m	m	m	m	m
South Africa	100	100	a	a	a	a	a	a	66	m	m	21	23	m	m	m
EU25 average	92	92	58	33	32	82	0	18	54	60	48	32	29	49	48	2
G20 average	94	86	50	26	25	m	m	m	52	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter B4. How do student profiles, study choices and mobility trends shape tertiary education?

Highlights

- Bachelor's or equivalent programmes are the dominant entry point to tertiary education in most OECD countries; on average 78% of all new entrants to tertiary education enter a bachelor's programme.
- Pursuing doctoral studies is more common in science, technology, engineering and mathematics (STEM) fields than in other fields. More than two-fifths of all doctorate holders graduated from a STEM field on average – twice the share at bachelor's level.
- Students from Asia form the largest regional group of foreign or international students enrolled in tertiary education programmes in OECD countries, totalling 58% of all internationally mobile students across the OECD in 2023.

Context

Tertiary education pathways play a key role in shaping individual futures and meeting national skills needs. As more students access higher levels of education, understanding who enters tertiary education, and what and where they study becomes critical for designing inclusive and forward-looking education policies.

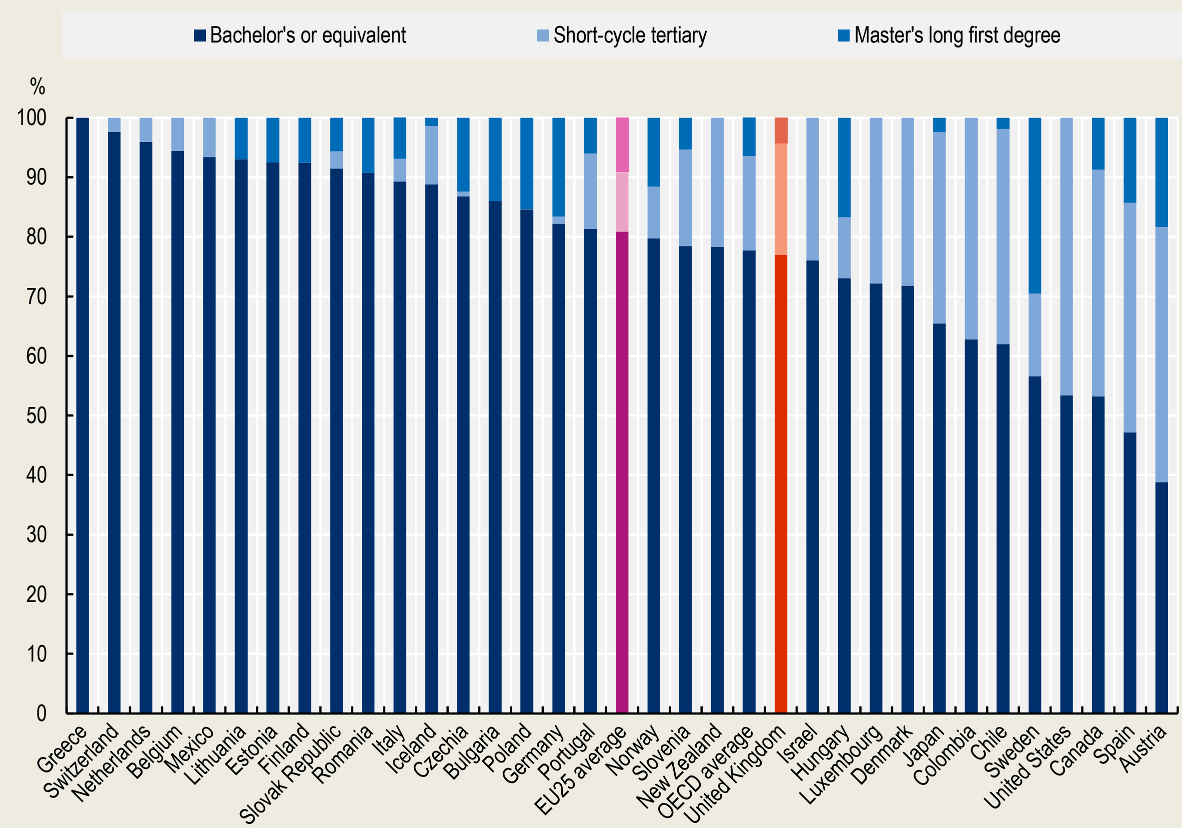
The characteristics of first-time entrants into tertiary education provide valuable insights into access and equity. Choices made at this stage – such as the type of programme (short or long) and the age of entry – reflect both individual aspirations and the broader structures that guide educational pathways. These decisions not only shape students' academic and professional prospects, but also reveal disparities that policy makers need to address to ensure equal opportunities for all (OECD, 2023[1]; OECD, 2024[2]).

The field of study chosen by graduates is another key dimension. The choice reflects a complex balance between personal interests, societal expectations and labour-market needs. At the doctoral level, a particularly large share of graduates specialise in STEM fields, which play a critical role in building national innovation systems. Preparing for future challenges requires long-term investment in research, skills and infrastructure - capacities that are largely underpinned by doctoral-level STEM education. Understanding these enrolment patterns can help governments strengthen the strategic alignment between education systems and national development goals (OECD, 2023[3]; OECD, 2023[4]).

International mobility continues to expand, with ever larger numbers of students crossing borders to pursue tertiary education. Over the past decade, the growing number of such mobile students has reshaped global higher education. Trends in mobility – and changes in the distribution of students by country of origin – serve as important signals about the attractiveness of national education systems and their ability to integrate diverse student populations. These trends also carry strategic importance for countries, as international students can contribute significantly to the economy and innovation ecosystem, particularly if they remain after graduation (OECD, 2024[5]; OECD, 2025[6]).

Together, these dimensions provide a nuanced picture of access, participation and outcomes in tertiary education. They are essential for developing education policies that not only respond to immediate needs but also support long-term equity, inclusion and economic development. Policies must ensure that the diversity of student profiles is fully taken into account, and that dedicated strategies are developed to support the participation and success of all under-represented or disadvantaged groups (Box B4.1).

Figure B4.1. Distribution of first-time entrants into tertiary education, by level of education (2023)



For data, see Table B4.1. For a link to download the data, see Tables and Notes section.

Other findings

- Across OECD countries, students enter tertiary education at an average age of 22, but most start before then, as older entrants skew the average upwards.
- Women make up the majority of students who are first entering tertiary education. They represent 54% of first-time entrants on average, a share that has largely remained unchanged since 2013.
- The share of internationally mobile students relative to all tertiary enrolments has risen in nearly all OECD and partner countries between 2013 and 2023.

- More than 46% of all internationally mobile students in OECD and partner countries study in Australia, Canada, the United Kingdom or the United States.

Note

This chapter draws on data on first-time tertiary entrants by gender, age and mobility status; graduates by field of study, and enrolled students by mobility status and country of origin.

Analysis

Profile of tertiary students

Students who have completed upper secondary education generally have three options if they wish to continue on to tertiary education: short-cycle tertiary programmes, bachelor's programmes and long first degree master's programmes (also known as integrated programmes). Although the structure and prevalence of these pathways vary across countries, they generally follow similar patterns.

Short-cycle tertiary programmes (ISCED level 5) typically last one to two years and are oriented towards the acquisition of technical or applied skills. They often require an upper secondary qualification, although some countries may impose additional criteria. Bachelor's programmes (ISCED level 6) usually span three to four years, offering a mix of theoretical and practical learning. Entry requirements can vary, ranging from open access systems to selective admission based on grades or specific subjects. Long first degree master's programmes (ISCED level 7), which integrate undergraduate and graduate study into a single programme of five to six years, are most commonly found in fields such as medicine, engineering and law. Admission to these programmes is typically more selective (see Chapter D6 for an in-depth analysis of tertiary admissions systems).

Bachelor's programmes are available in all OECD and partner countries, but short-cycle tertiary and long first degree programmes are not universally offered. For example, Bulgaria, Estonia, Finland, Greece and Romania do not offer short-cycle tertiary programmes. However, professionally oriented bachelor's programmes often fulfil a similar role in these systems. In Estonia, for instance, professional higher education programmes (*rakenduskõrgharidusõpe*) last between three and four and a half years, are closely aligned with labour-market needs, and allow access to master's programmes.

Equally, long first degree programmes are not offered in a number of countries, including Belgium, Colombia, Greece, Israel, Mexico, the Netherlands, New Zealand, Switzerland and the United States. In these countries, students typically follow a sequential model. In the United States, for example, students aiming to become medical doctors usually complete a four-year bachelor's degree followed by a separate four-year professional programme in medicine.

These different programme types tend to lead to different labour-market outcomes, although this varies by country and field of study. In some countries, graduates from short-cycle tertiary programmes report higher employment rates than those from bachelor's programmes due to their strong alignment with specific labour-market needs. In other countries, bachelor's or integrated master's graduates have better outcomes. These differences are also closely linked to the fields of study pursued, which influence both employment opportunities and wage prospects (see Chapters A3 and A4).

Students' ages when they first enter tertiary education.

The average age at which students enter tertiary education for the first time varies across OECD countries, reflecting a range of structural, cultural and policy-related factors. While delayed entry into tertiary education can increase public costs, by postponing labour-market participation and therefore reducing tax revenues, it can also support lifelong learning. Many individuals pursue a degree mid-career after gaining work experience, which can lead to more informed choices and greater workforce adaptability.

Across OECD countries, the average age for students first entering tertiary education is 22, but most start when they are younger than that, as older entrants skew the average. This average also conceals significant cross-country variation. In Denmark, for instance, the average age of entry is slightly above 25, the highest among OECD countries. At the other end of the scale, students in Belgium, Japan, the Netherlands and the United States typically begin tertiary education before the age of 20. In the United States, the relatively high share of students enrolling in short-cycle tertiary programmes – which often attract younger entrants – contributes to this lower average age (OECD, 2025[7]). These contrasts highlight the diversity of educational pathways and the dual role of tertiary education in supporting both initial education and lifelong learning (Table B4.1).

Delayed entry may also reflect barriers to access to tertiary education, such as selective admission systems or the implementation of *numerus clausus* policies that cap the number of students admitted to specific programmes. In Finland and Sweden, for example, restricted admissions in several fields result in more than 60% of applicants being rejected (see Chapter D6), leading some students to apply multiple times or seek alternative pathways before gaining admission. Mandatory military service may also contribute to higher average entry ages. In Israel, for example, national conscription delays entry for many students, and only around one-quarter of new entrants to bachelor's programmes enrol immediately after leaving upper secondary education (see Chapter B3).

Distribution of first-time entrants into tertiary education.

Bachelor’s or equivalent programmes are the dominant entry point into tertiary education in most OECD countries. More than half of first-time entrants to tertiary programmes are enrolled in bachelor’s programmes in all OECD and partner countries except Austria and Spain (Figure B4.1). The next commonest entry point is short-cycle tertiary. On average across OECD countries, first-time entrants in these programmes represent 16% of all new entrants. Long first degree master’s programmes are the least common entry point. Austria, Germany, Hungary and Sweden have the largest share of first-time entrants who are enrolled in long first-degree programmes, with the share in Sweden reaching 30% (Table B4.1).

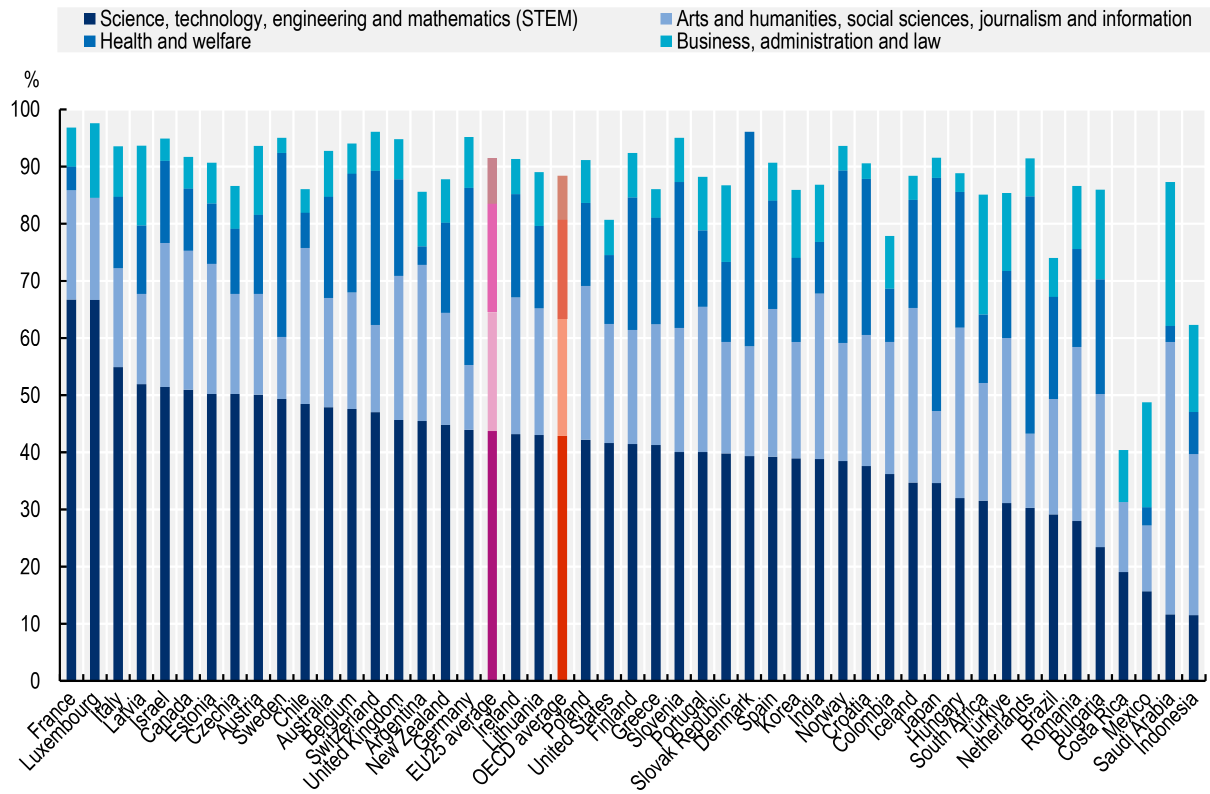
This pattern of distribution has remained largely stable in the past decade, although some countries have experienced noticeable changes. On average across the OECD, the share of first-time tertiary entrants enrolled in bachelor’s programmes has remained stable between 2013 and 2023 at 76-77% (Table B4.1). In Sweden, the share has fallen by 17 percentage points while the share of first-time entrants going into short-cycle tertiary programmes rose by 12 percentage points over that period. Most students in short-cycle tertiary programmes in Sweden were enrolled in a vocational track in 2023 (OECD, 2025[7]). Over recent years, Sweden has launched a series of reforms to increase the involvement of social partners in vocational education and training (VET), to increase the provision of work-based learning in VET programmes and to promote apprenticeships. Sweden launched higher VET in 2002 and it has since been expanding (Kuczera and Jeon, 2019[8]).

Share of new entrants by gender

Gender disparities in tertiary participation have reversed over past decades, with women long since surpassing men. This trend has largely stabilised in the last decade: women made up 54% of first-time entrants to tertiary education in OECD countries on average in 2023, a share that has largely remained unchanged since 2013. Iceland and New Zealand have the largest share of female first-time entrants among OECD countries while Germany, Japan and Switzerland are the three OECD countries closest to gender parity (Table B4.1). Women are also more likely to complete their tertiary degree than men (see Chapter B5).

Box B4.1 discusses strategies implemented by countries to promote equity in tertiary education targeting under-represented or disadvantaged groups.

Figure B4.2. Distribution of doctoral graduates, by selected field of study (2023)



For data, see Table B4.2. For a link to download the data, see Tables and Notes section.

Box B4.1. Strategies to promote equity in higher education for under-represented or disadvantaged groups

In recent years, many countries have introduced policies and regulatory measures aimed at making tertiary education more equitable for under-represented or disadvantaged groups. These initiatives generally fall into two broad categories: the use of quota or target-based admissions systems, and the provision of targeted support, whether that be financial support to reduce economic barriers to participation, or specific improvements to study infrastructure and housing.

Brazil and Norway, among other countries, employ quota systems or affirmative action policies to enhance equitable access to higher education. For example, Brazil's Quota Law ensures reserved spots for students from disadvantaged groups like black, indigenous and communities of formerly enslaved people (Leal, 2024[9]). Norway has introduced quotas to address gender imbalances, as well as reserving some places for students from the indigenous Sami population (Kifinfo, 2019[10]; Kifinfo, 2023[11]).

Many countries provide financial support to tertiary students and in some cases this is specifically targeted on disadvantaged students. Denmark provides grants and support for students with functional impairments or disabilities in the form of targeted guidance services, workshops on transitions to higher education and the development of inclusive learning tools through a dedicated research centre (Eurydice, 2024[12]). Ireland's National Access Plan includes funds like the Programme for Access to Higher Education (PATH), valued at over EUR 30 million, to support under-resourced groups in higher education, in particular Traveller and Roma students (Higher Education Authority, n.d.[13]). Latvia's student honour scholarships support students from underprivileged backgrounds (Government of Latvia, 2023[14]). Japan has introduced a new financial support system offering tuition reductions and scholarships for low-income students from the year 2020 (Cabinet Decision, 2017[15]).

Australia and Ireland have introduced targeted policies to support tertiary students through improved study infrastructure and housing initiatives. Australia's Suburban and Regional University Study Hubs provide support to students living in regional, remote and outer metropolitan areas. These hubs offer dedicated study facilities like study spaces, break out areas, video conferencing, computer facilities and Internet access along with comprehensive support services (Australian Government, 2025[16]). In 2022, Ireland launched its first state-funded student accommodation policy to expand purpose-built housing and reduce strain on the private rental market. A dedicated unit oversees implementation, with added measures like tax credits, financial aid and rental protections for students (Irish Government, 2023[17]).

Distribution of graduates by field of study

The distribution of tertiary graduates by field of study shows clear patterns of specialisation that evolve as students progress to higher education levels.

At short-cycle tertiary level, graduates tend to be concentrated in applied domains, although patterns vary considerably across countries depending on which programmes are offered at this level. On average across OECD countries, around one-quarter earned their credentials in STEM fields, while about one-fifth graduated from programmes in business, administration and law. Health and welfare accounts for roughly one-sixth of graduates, a modest but still sizeable share that reflects the vocational orientation of many healthcare assistant and nursing associate programmes. Arts and humanities, social sciences, journalism and information attract a slightly smaller proportion, underscoring the strongly technical focus of short-cycle provision (Table B4.2).

The distribution becomes more balanced at bachelor's level where three of the four broad fields each claim a similar share of graduates (roughly one-fifth to one-quarter) with health and welfare slightly below at one-sixth, suggesting that bachelor's programmes provide a broad platform for both general and professional learning. STEM fields represent the largest share at this level, accounting for 23% of bachelor's graduates on average across OECD countries. Arts and humanities account for 22% of bachelor's graduates on average across the OECD – more than at any other level – reflecting strong demand for broadly transferable skills at the initial degree stage. Business, administration and law also account for 23%, pointing to a role as a springboard into a wide range of occupations. (Table B4.2).

The distribution is also relatively balanced at master's level. Similar to short-cycle tertiary and bachelor's levels, health and welfare remain at one-sixth of graduates on average across OECD countries. The share of STEM graduates dips slightly at master's level (22% compared to 23% at bachelor's level), but still suggests sustained interest in advanced scientific expertise. The most pronounced change occurs in business, administration and law: nearly three in ten master's graduates hold a business-related qualification, highlighting the popularity of professional programmes such as a Master of Business Administration (MBA) that helps mid-career adults upgrade their management skills. Meanwhile, arts and humanities see a marked decline in relative terms, falling from more than one-fifth at bachelor's level to more than one-sixth at master's, signalling a shift towards more specialised or professionally focused fields in postgraduate study (Table B4.2).

As Figure B4.2 shows, doctoral studies are dominated by STEM fields, which account for more than two-fifths of all PhDs on average – almost twice the share at bachelor's level, signalling that research-intensive activity is concentrated in scientific and technological disciplines. Health and welfare rises to just over one-sixth of doctoral graduates, mirroring the growing importance of biomedical and public health research. Arts, humanities and the social sciences, while showing a relative decline, still account for a relevant share of around one-fifth of doctoral graduates, but business, administration and law represent only 8% of doctorates. Taken together, these patterns illustrate a progressive shift from immediate employability at lower tertiary levels towards advanced research and innovation capacity at the doctoral stage, highlighting the importance for policy makers of ensuring both breadth and depth in tertiary provision.

In most OECD and partner countries, around 80-90% of all doctoral graduates in 2023 earned their degrees in one of these four broad fields, reflecting the dominant role these disciplines play in national research strategies and talent development at the highest education level (Figure B4.2). However, there can be big differences across countries. For instance, Costa Rica, Indonesia and Mexico report notably lower shares of doctoral graduates in these fields. This is largely due to the high proportion of doctoral graduates in the field of education, which accounts for more than 25% of all doctorates in these countries (OECD, 2025[7]).

Among countries with concentrations closer to the OECD average, considerable differences emerge. STEM fields account for 43% of doctorates on average, but this figure rises to over 60% in France and Luxembourg, suggesting a deliberate investment in technical and scientific research capacity. Health and welfare is another area of divergence: while the OECD average is 17%, countries such as Denmark, Japan and the Netherlands channel a much larger share of doctoral training into this field (more than 35%), likely tied to national health research priorities and workforce planning (Figure B4.2).

Doctorates in art, humanities and social sciences range from 30% or more in Hungary, Iceland, Romania and Saudi Arabia, to 11% in Germany and Sweden. Meanwhile, Bulgaria, Indonesia, Mexico, Saudi Arabia and South Africa stand out with above-average shares of doctoral graduates in business, administration and law, at over 15% (Table B4.2). These variations illustrate how countries align doctoral education with different socio-economic objectives – from innovation-driven growth to social services and public sector development while also being shaped by individual preferences, cultural context, and institutional autonomy.

Box B4.2. Professional programmes at tertiary level: Strengthening career pathways for vocational graduates

The International Standard Classification of Education (ISCED 2011) provides a definition of distinct vocational tracks for short-cycle tertiary programmes (ISCED 5), but does not do so for bachelor's, master's or doctoral programmes (ISCED 6-8). However, several countries have professional programmes that build on prior vocational qualifications at higher ISCED levels. These programmes typically have a strong labour-market focus and combine advanced theoretical knowledge with practical training. They are often designed to provide advanced upskilling opportunities for individuals with a background in vocational education and training (VET), enabling them to advance into highly skilled or supervisory roles.

As tertiary education systems evolve to accommodate more diverse learners and respond to the rising demand for advanced technical skills driven by digitalisation and the green transition, professional programmes are playing an increasingly important role. By offering advanced pathways for individuals to develop their skills, they expand access to tertiary education while strengthening the link between tertiary education and the labour market. In addition, they promote lifelong learning and ensure that graduates from vocational programmes have attractive career prospects (OECD, 2023[18]).

In response to this broad policy shift, many countries have expanded their tertiary professional programmes in recent years. Examples include:

- In 2020, Germany amended its Vocational Training Act to introduce three higher qualification levels of further training with internationally understood qualification titles: the Certified Professional Specialist (aligned with ISCED level 5), the Bachelor Professional (ISCED level 6) and the Master Professional (ISCED level 7). These titles are meant to reflect the equivalence between vocational qualifications and university degrees in terms of complexity as well as responsibility levels and ensure their international comparability and visibility.
- In recent years, several provinces and pan-Canadian post-secondary associations have explored and adopted micro-credentials to varying extents. In 2021, Colleges and Institutes Canada released a national framework, endorsed by all regional college bodies, defining micro-credentials as assessed certifications

of discrete competencies that can complement formal qualifications. The provinces of Alberta, British Columbia, Manitoba, Ontario and Nova Scotia have also introduced frameworks, guides and funding to support short, skills-focused micro-credentials for rapid upskilling and reskilling. Although these initiatives have broadened technical training, most micro-credentials remain outside formal credit systems and provincial qualification frameworks. Ontario has also introduced regulatory mechanisms for new three- and four-year applied undergraduate degrees in key sectors, expanding qualification options beyond traditional university degrees.

- In England (United Kingdom), degree apprenticeships combine on-the-job training with academic learning, aligned with occupational standards. Apprentices spend at least 20% of their time in training or studying and achieve an undergraduate or master's degree over 3-6 years. Degree apprenticeships are popular with both learners and employers and as both entry or progression routes in a wide range of professions. However, their rapid growth has caused the UK government to seek to rebalance them away from older, mid-career employees on master's-level programmes towards a greater focus on those at the start of their careers.
- Higher VET in Austria is characterised by its heterogeneity, with many different providers offering a range of qualifications outside the formal education system which are not yet included in the statistics. Because of its important role in the economy, Austria is striving to consolidate the higher VET sector and is in the process of establishing it as a separate segment of its education system. A corresponding legal act, the Federal Act on Higher Vocational Education and Training (HBB) has been in force since 2024 (CEDEFOP, 2025[19]).
- In 2020, Sweden introduced short courses within Higher Vocational Education (HVE) to offer more flexible upskilling opportunities for working adults. HVE (Yrkeshögskolan) is a post-secondary form of education that combines theoretical and practical learning in close cooperation with employers and industry. Programmes are offered in fields with clearly identified labour market needs, and the newly introduced short courses correspond to a maximum of six months of study, targeting individuals already in employment.
- In the Netherlands, the Associate Degree is a relatively new form of education. It is a two-year academic programme in higher vocational education, combining foundational knowledge and practical skills in a specific field of study. It is designed to prepare students for either entry-level employment or further education, such as transferring to a Bachelor's degree programme in higher vocational education. The curriculum typically combines general education courses with specialised classes related to the chosen discipline, providing a combination of theory and practical experience.

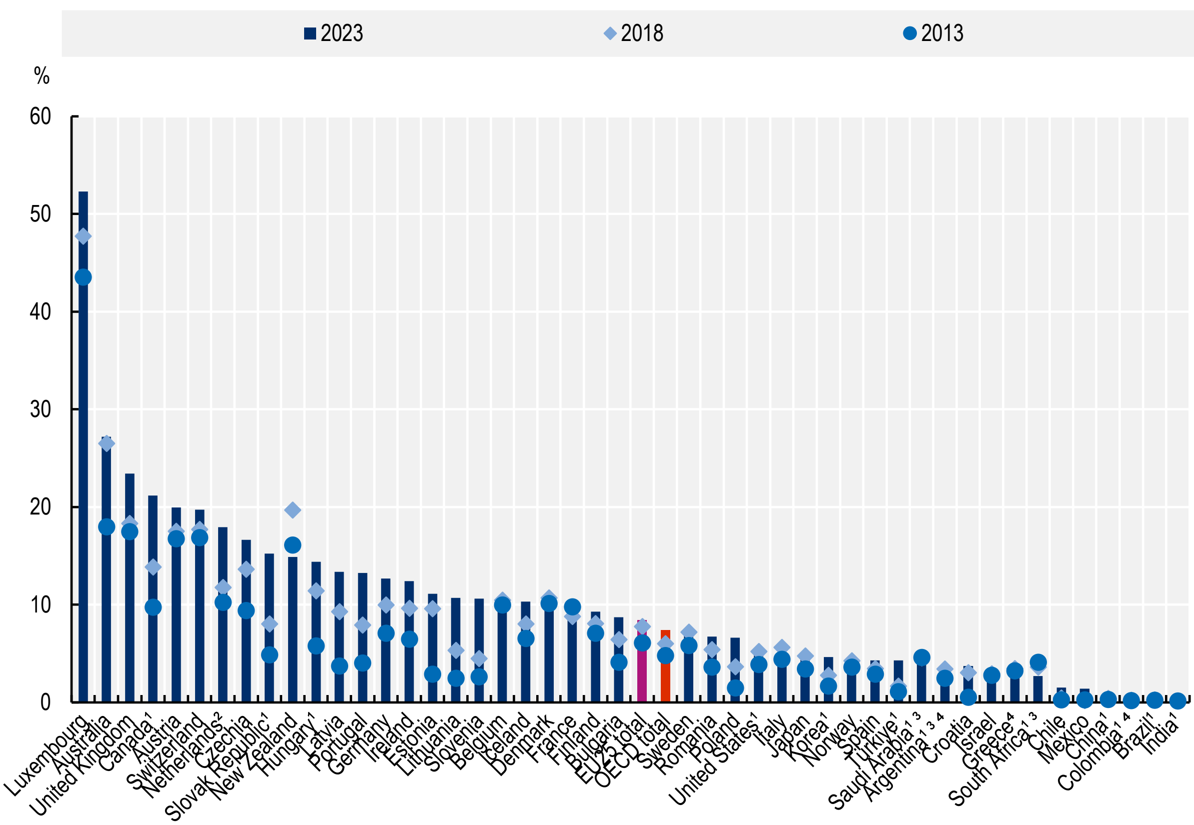
Due to the lack of internationally agreed definitions of tertiary programme orientations, professional programmes cannot be systematically identified in international education statistics. This limits the visibility of such programmes, especially in international comparative education analysis, despite their importance in the labour market. As a result, their contribution to educational progression and labour-market responsiveness is often under-represented in the data and policy analysis. Readers are advised to bear this in mind when interpreting tertiary education data.

Profile of internationally mobile students

The proportion of mobile students – international or foreign – as a share of all tertiary enrolments has risen in nearly all countries between 2013 and 2023 (Figure B4.3). New Zealand is a notable exception, with a 1.2 percentage point decrease in the share of international students, attributed largely to stringent travel restrictions coinciding with the start of the academic year during the COVID-19 pandemic. This is a reversal from the upward trend observed in New Zealand between 2013 and 2018, when the share increased by 4 percentage points. In several countries where international students accounted for 5% or less of total tertiary enrolments in 2013, the share more than doubled over the past decade, reaching over 10% in 2023. This trend is particularly notable in Estonia, Latvia, Lithuania, Portugal, the Slovak Republic and Slovenia, reflecting a growing internationalisation of their tertiary education systems. (Table B4.3).

English-speaking countries are the most attractive student destinations overall. Together, Australia, Canada, the United Kingdom and the United States receive 46% of all internationally mobile students in OECD and partner countries. The United States is the top OECD destination country for mobile tertiary students, despite having only 5% of students with an international or foreign background. Of the 5.02 million internationally mobile students in OECD countries, 957 000 are enrolled in the United States. Among non-English speaking countries, France, Germany, and the Republic of Türkiye each take about 5% or more of the total share of international students in OECD and partner countries (Table B4.3).

Figure B4.3. Trends in the share of international or foreign students in tertiary education (2013, 2018 and 2023)



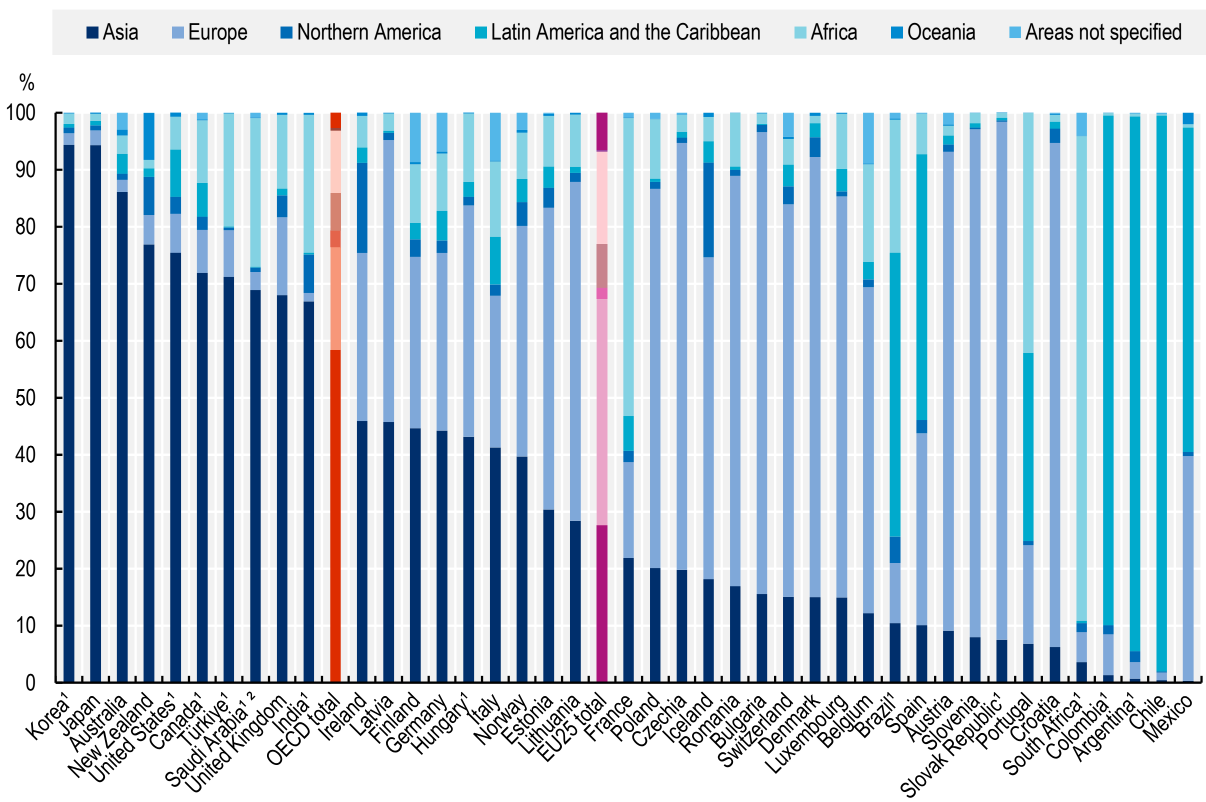
1. Data refers to foreign students.
2. Data for total tertiary does not include doctoral students.
3. Year of reference differs from 2023.
4. Year of reference differs from 2013.
For data, see Table B4.3. For a link to download the data, see Tables and Notes section.

Regions of origin

Students from Asia form the largest group of internationally mobile students enrolled in tertiary education programmes, totalling 58% of all such students across the OECD in 2023. Europe is the next largest region of origin, with European students making up 19% of all mobile students enrolled in OECD countries. Many European students stay within Europe, accounting for 39% of mobile students enrolled in the EU25 countries (Figure B4.4).

Across OECD and partner countries, South Africa sees the largest share of mobile students from African countries: 86% of its mobile students are from other African countries. African students also account for 42% of mobile students in Portugal and 52% in France, reflecting enduring historical, linguistic and cultural ties rooted in former colonial relationships. Student flows from Latin America and the Caribbean highlight the importance of proximity, as they make up the majority of mobile students in Argentina, Brazil, Chile, and Colombia. They also highlight the importance of the language of study: more than 30% of mobile students in Portugal and Spain come from this region. North American students only account for a little more than 15% of international enrolment in Iceland and Ireland, while students from Oceania are a tiny minority among international students in all OECD and partner countries, making up less than 1% of mobile students in OECD destination countries (Figure B4.4).

Figure B4.4. Distribution of international or foreign students studying in OECD countries, by region of origin (2023)



1. Data refers to foreign students.
2. Year of reference differs from 2023.
For data, see Table B4.3. For a link to download the data, see Tables and Notes section.

Some countries have implemented policies targeted at increasing the mobility of students within their region to deepen regional partnerships and diversify the pool of international students. The New Colombo Plan is a signature initiative of the Australian Government which encourages a two-way flow of students between Australia and the rest of Oceania. The programme involves a scholarship programme for study of up to one year, language training and internships or mentorships, as well as a flexible mobility programme for both short and longer-term study, language study, internships, practicums and research (Australian Government, 2024[19]). The Chilean Agency for International Cooperation for Development (AGCID) offers scholarships for foreign students from developing countries in the Latin American region to pursue postgraduate studies in Chilean universities, fostering academic mobility and international collaboration in the region (AGCID, n.d.[20]). The Erasmus programme, launched by the EU in 1987, aimed to foster co-operation and student exchange among European universities. It has since evolved into Erasmus+, a broader initiative supporting mobility and collaboration in education, training, youth and sport across and beyond Europe. Over 16 million people have participated since its inception (European Commission, 2025[21]). Box B4.3 discusses shorter-duration international mobility in European countries in more depth.

Box B4.3. Regional reach of credit mobility in OECD and EU countries

Credit mobility refers to temporary study period abroad that is part of a student's degree programme, often lasting one semester or less (UNESCO-UIS/OECD/Eurostat, 2024[22]). There are two types of credit-mobile students:

- **Non-degree mobile**: the student is enrolled in a university in their home country and goes abroad temporarily for credit mobility, for example a Romanian student studying in Romania who goes on exchange to Spain.
- **Degree mobile**: the student is already enrolled in a full degree abroad and also goes on a temporary exchange, for example a Romanian studying for a full degree in the United Kingdom who goes on exchange to Spain.

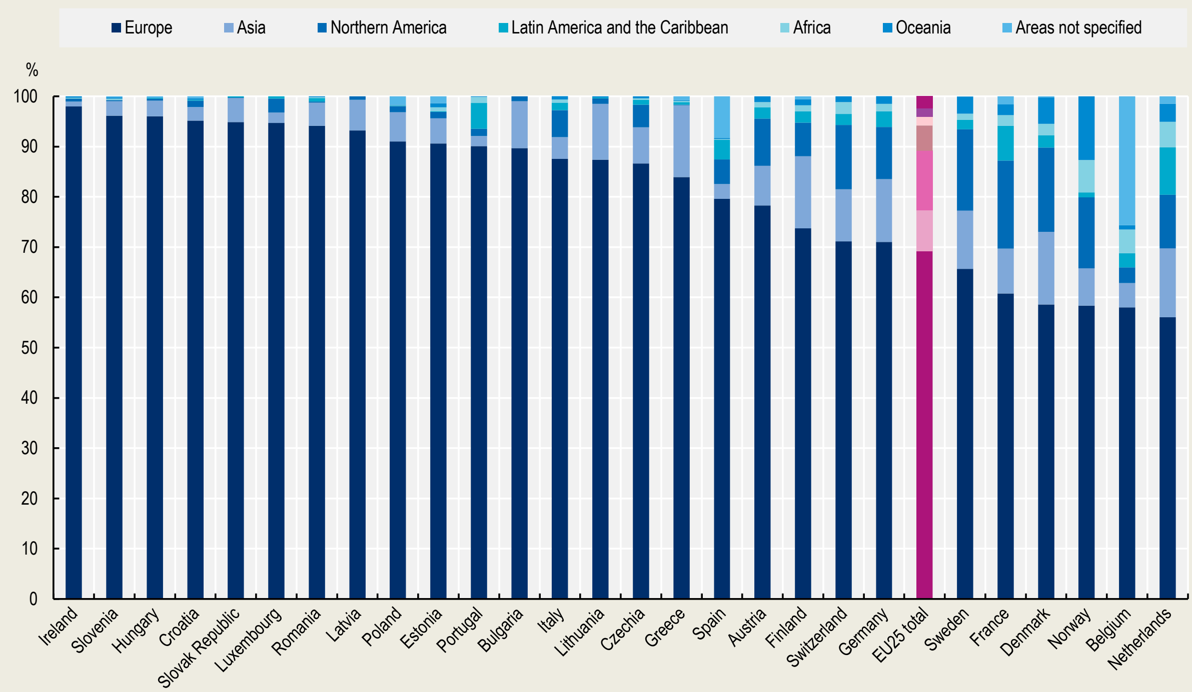
In most countries, 71% of credit-mobile students are non-degree mobile, meaning credit mobility is their only form of international mobility. In contrast, degree-mobile students are already abroad and take credit mobility in addition to their existing degree mobility.

In the European context, such exchanges are typically supported through EU programmes such as Erasmus+ but can also occur via bilateral or institutional agreements (Eurostat, 2024[23]). This textbox analyses the regional destinations of credit-mobile graduates in 2023 across OECD and EU countries (Figure B4.5).

In 2023, 392 600 graduates across reporting countries participated in credit mobility, with most enrolled in bachelor's or master's programmes. Master's-level mobility was particularly prominent, especially in France, which accounted for nearly half of all mobile master's graduates. In countries such as the Netherlands and Spain, the number of students undertaking credit mobility at the bachelor's level is between three and five times higher than at the master's level, highlighting significant differences in national patterns of engagement with international study across education levels.

Figure B4.5 shows that most European credit-mobile graduates pursue their study abroad within the continent. In nearly all countries, a large majority of credit-mobile graduates chose European destinations, rising to over 95% of such students in countries including Hungary, Ireland, Slovenia and Croatia. However, these figures highlight a two-tiered pattern of mobility: while in Central and Eastern Europe, mobility remains highly concentrated within Europe, in Western and Northern Europe, mobility flows are more internationally distributed, reflecting broader institutional linkages and resources. In Belgium, Denmark, the Netherlands and Norway, at least 40% of credit-mobile graduates went beyond Europe in 2023.

Figure B4.5. Distribution of tertiary graduates from European countries with credit mobility, by destination region (2023)



For data, see Table B4.4. For a link to download the data, see Tables and Notes section.

The strong concentration of credit-mobile students within Europe reflects several well-established factors: the geographical proximity of partner institutions, the harmonised frameworks of the European Higher Education Area, and the institutional and financial support provided through Erasmus+. For many Central Eastern European countries, intra-European exchanges offer the most accessible and administratively straightforward option for international study (Teichler, 2017[24]; European Commission, 2024[25]; European Commission, 2021[26]).

In contrast, students in Western and Northern European countries are more likely to access bilateral programmes or institutional agreements with countries outside Europe, supported by stronger institutional capacity, greater language flexibility and targeted funding schemes. This creates opportunities for richer academic exchange but may also reinforce existing asymmetries in access to global networks (European Commission, 2024[25]).

Policies to influence the number of international students

Many countries have initiatives to promote themselves as study destinations. Estonia's Study in Estonia initiative aims to attract international students to Estonia by providing information about the Estonian education system and promoting study opportunities for international students. It also seeks to foster positive societal attitudes by highlighting the students' beneficial economic impact, including their contributions to society (Study in Estonia, n.d.[27]). The Study Korea 300K Project, launched in 2024, aims to attract 300 000 international students to Korea by 2027 to enhance educational competitiveness. The programme involves expanding English-taught programmes, easing language and residency barriers, and providing financial support, among other actions (ICEF Monitor, 2023[28]). Similarly, *Türkiye Scholarships* is a government-funded programme that offers academically successful international students the opportunity to pursue higher education in Türkiye. The programme aims to promote equal access to quality education while strengthening international cooperation and contributing to global development across various fields (Türkiye Scholarships, 2025[29]).

Several countries set target numbers for international students they want to attract. The *Bienvenue en France* plan seeks to attract 500 000 foreign students by 2027 (Campus France, n.d.[30]). Under the Talent Boost programme, the Finnish Government set a 2023-27 target to triple the number of new foreign students to 15 000 student a year and retain 75% in Finland's labour market (Government of Finland, n.d.[31]). In Japan, the government aims to attract 400 000 international students and send 500 000 Japanese students abroad by 2033, through initiatives including study abroad fairs and scholarship programmes (ICEF monitor, 2024[32]). Understanding the concentration patterns of internationally mobile students may help countries design policies to influence these flows (Box B4.4).

In contrast, a few countries have started to limit the numbers of international students. Authorities in the French Community of Belgium have set quotas of up to 30% on first entrants from international backgrounds, in order to manage high demand for study programmes in medicine, paramedicine, architecture and other art-related fields (Wallonie Bruxelles Campus, 2025[33]). In Denmark, recent initiatives have concentrated on regulating the number of places in programmes taught in English, limiting international student intake since 2021 (ICEF Monitor, 2024[34]). However, the number of places has recently been increased, particularly in fields with high labour market demand and at campuses located outside major cities (Ministry of Higher Education and Science, 2024[35]). The Netherlands' Internationalization Act proposes student caps and stricter language rules to manage international student numbers while maintaining Dutch as the primary language of instruction (Eerste Kamer der Staten-Generaal, n.d.[36]).

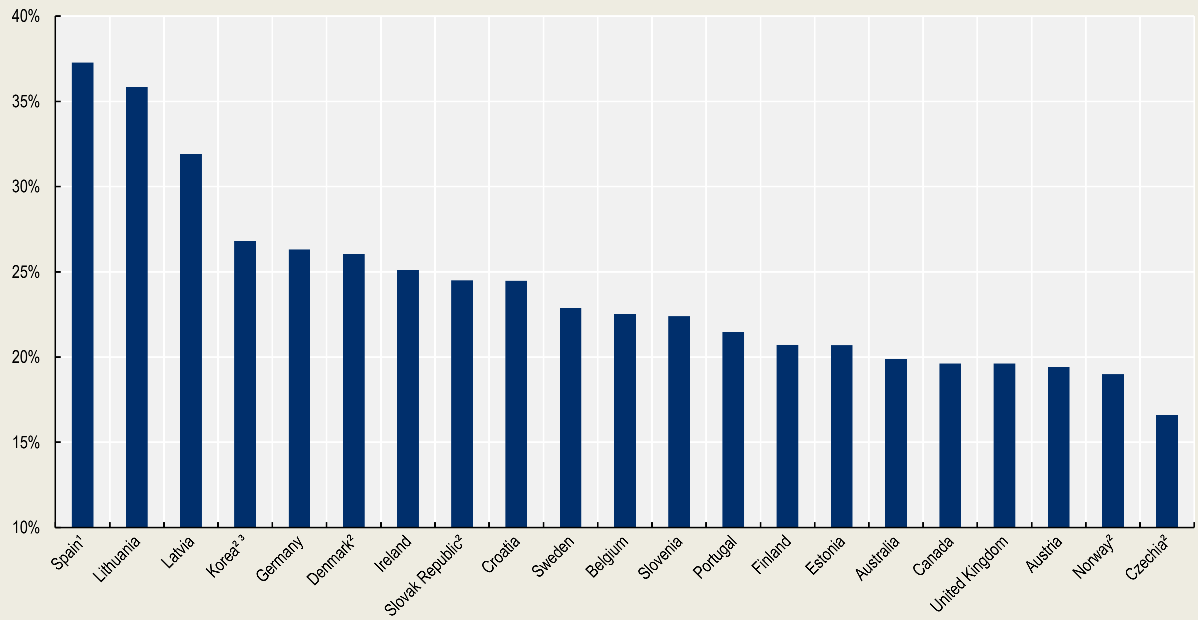
Box B4.4. Concentrations of internationally mobile students

When developing policies to manage the flow of international students, it is essential to understand whether international mobile students are particularly attracted by a few leading institutions within a country or whether they are widely distributed across tertiary institutions. For example, a country aiming to attract more international students, and currently experiencing a high concentration of them in a few institutions, may need to implement policies that enhance the appeal of other institutions.

To support this, a new indicator has been developed to measure the concentration of internationally mobile students at the country level using institutional-level data. The concentration of international mobile student indicator identifies the institutions within a country that both represent 10% of the country's total tertiary enrolment as well as have the greatest shares of mobile students at the institutional level. It then calculates the share of the country's international mobile students that are enrolled in these institutions. The 10% national enrolment threshold serves as a benchmark: if mobile students mobile students were evenly distributed across institutions in proportion to their enrolment sizes — with larger institutions hosting more international students and smaller ones fewer, the indicator would be exactly 10%. Conversely, if all the mobile students of a country were in the selected institutions, the value would be 100%. This indicator does not measure the share of international or foreign students in the overall student population nor does it reflect the concentration of mobile students within individual institutions. Rather, it captures how mobile students are distributed across the higher education system as a whole, regardless of the size of individual institutions.

Figure B4.6. Concentration of internationally mobile students (2023)

Higher values indicate a greater concentration of international students in the most international institutions of a country



Note: The values represent the proportion of a country's total mobile students enrolled at institutions with the highest concentrations of mobile students, which collectively account for exactly 10% of the total national tertiary enrolment. A higher value indicates that mobile students are concentrated in fewer institutions. If mobile students were evenly distributed across all institutions, this indicator would equal exactly 10%. This analysis focuses on bachelor's, master's, and doctoral programmes (ISCED levels 6 to 8). The number of international mobile students is based on the mobility definition in the EHESO database.
1. Year of reference differs from 2023: 2022 for Spain.
2. Data is based on citizenship breakdown rather than mobility breakdown.
3. Internationally mobile students also include foreign students enrolled in non-degree programmes and students enrolled in short-cycle tertiary programmes.
Source: Data based on European Higher Education Sector Observatory (EHESO) (2025). Please note that the reference year in EHESO is 2022, which corresponds to the academic year 2022/2023 and is shown as 2023 in this publication. Data for Australia, Canada and Korea are from national data sources.

Figure B4.6 presents the international student concentration indicator for countries with available data. Spain shows the highest concentration level, suggesting that international students are clustered in a relatively small number of institutions. In contrast, Czechia displays lower levels of concentration, pointing to a more even distribution of international students across their higher education systems. Notably, countries with very high shares of mobile students, such as Austria, Australia, Canada and the United Kingdom (Figure B4.3), also exhibit low levels of concentration among their mobile student populations. This pattern may indicate that a more even distribution of international students across tertiary institutions could be associated with the overall attractiveness of a country to international students.

Rather than focusing solely on absolute levels, this indicator offers a meaningful basis for cross-country comparisons, offering valuable comparative insights into the distribution and concentration of internationally mobile students.

Definitions

First-time entrants into tertiary education are new entrants at ISCED levels 5, 6 or 7 who are also entering tertiary education for the first time.

Foreign students are those who are not citizens of the country in which they are enrolled and where the data are collected. Although they are counted as internationally mobile, they may be long-term residents or even be born in the "host" country. While pragmatic and operational, this classification may be inappropriate for capturing student mobility because of differing national policies regarding the naturalisation of immigrants. For instance, Australia has a greater propensity than Switzerland to grant permanent residence to its immigrant populations. This implies that even when the proportion of foreign students in tertiary enrolment is similar for both countries, the proportion of international students in tertiary education will be smaller in Switzerland than in Australia. Therefore, for student mobility and bilateral comparisons, interpretations of data based on the concept of foreign students should be made with caution. In general, international students are a subset of foreign students.

International students are those who left their country of origin and moved to another country for the purpose of study. The country of origin of a tertiary student is defined according to the criterion of "country of upper secondary education", "country of prior education" or "country of usual residence" (see below). Depending on country-specific immigration legislation, mobility arrangements (such as the free mobility of individuals within the European Union and the European Economic Area) and data availability, international students may be defined as students who are not permanent or usual residents of their country of study, or alternatively as students who obtained their prior education in a different country.

Mobile students are students who are either international or foreign.

Methodology

Defining and identifying mobile students, as well as their types of learning mobility, are a key challenge for developing international education statistics, since current international and national statistical systems only report domestic educational activities undertaken within national boundaries (OECD, 2018[37]).

Data on international and foreign students are therefore obtained from enrolments in their countries of destination. This is the same method used for collecting data on total enrolments, i.e. records of regularly enrolled students in an education programme.

Source

Data refer to the 2022/23 academic year and are based on the UNESCO-Institute of Statistics (UIS)/OECD/Eurostat data collection on education statistics administered by the OECD in 2024. Data for some countries may have a different reference year. For more information see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

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Tables and Notes

Chapter B4 Tables

Table B4.1	Profile of first-time entrants into tertiary education (2013 and 2023)
Table B4.2	Distribution of tertiary graduates, by level of education and selected field of study (2023)
Table B4.3	Profile of international or foreign students in tertiary education (2013, 2018 and 2023)
Table B4.4	Profile of tertiary graduates who had a temporary international study or work period (2023)

StatLink https://stat.link/9yrji1

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table B4.1. Profile of first-time entrants into tertiary education (2013 and 2023)

1. Year of reference differs from 2013: 2014 for Colombia, Denmark and Mexico; 2015 for Belgium, Greece, Hungary, Italy and Lithuania; 2016 for Estonia and the Slovak Republic; 2017 for Bulgaria, Canada and Spain; and 2018 for Japan.

Table B4.2. Distribution of tertiary graduates, by level of education and selected field of study (2023)

1. Year of reference differs from 2023: 2022 for Argentina, Saudi Arabia and South Africa.

Table B4.3. Profile of international or foreign students in tertiary education (2013, 2018 and 2023)

1. Data refers to foreign students.
2. Year of reference differs from 2013: 2014 for Colombia; 2015 for Croatia, Greece and Indonesia; and 2016 for Argentina..
3. Data for total tertiary does not include doctoral students.
4. Year of reference differs from 2023: 2022 for Saudi Arabia.

Table B4.4. Profile of tertiary graduates who had a temporary international study or work period (2023)

Note: Credit mobility is defined as temporary tertiary education or/and study-related traineeship abroad within a framework of enrolment in a tertiary education programme at a "home institution" (usually) for the purpose of gaining academic credit (i.e. credit that will be recognised in that home institution). Graduates with credit mobility stay are graduates from a tertiary programme at a given ISCED level who have had such a temporary period abroad within a programme at the same level.

1. Data for all tertiary do not include doctoral students.
2. Year of reference differs from 2023: 2022 for Switzerland.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table B4.1. Profile of first-time entrants into tertiary education (2013 and 2023)

Trends in the percentage of female and international or foreign entrants, average age at entry, and distribution by level of tertiary education

	Share of female first-time entrants		Average age of first-time entrants		Share of international or foreign first-time entrants		Distribution by level of education: Short-cycle tertiary		Distribution by level of education: Bachelor's or equivalent		Distribution by level of education: Master's long first degree	
	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	54	54	22	22	23	27	44	43	37	39	19	18
Belgium[1]	57	55	20	19	13	11	1	6	96	94	2	a
Canada[1]	54	54	21	22	18	29	36	38	56	53	7	9
Chile	52	53	22	22	0	2	45	36	52	62	3	2
Colombia[1]	52	52	22	23	0	0	35	37	65	63	a	a
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	58	56	22	22	12	21	1	1	91	87	8	12
Denmark[1]	54	55	24	26	14	5	24	28	70	72	7	a
Estonia[1]	57	56	22	22	9	8	a	a	94	93	6	7
Finland	55	55	22	24	12	16	a	a	94	92	6	8
France	m	m	m	m	m	m	m	m	m	m	m	m
Germany	50	51	22	23	10	12	0	1	81	82	18	17
Greece[1]	54	55	19	20	3	3	a	a	100	100	a	a
Hungary[1]	56	54	22	21	9	13	11	10	74	73	16	17
Iceland	58	59	25	24	18	13	5	10	89	89	6	1
Ireland	m	m	m	m	m	m	m	m	m	m	m	m
Israel	56	56	24	25	m	3	24	24	76	76	a	a
Italy[1]	55	56	20	20	5	5	1	4	84	89	15	11
Japan[1]	51	51	18	18	m	m	35	32	63	65	2	2
Korea	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania[1]	53	55	21	22	4	12	a	a	95	93	5	7
Luxembourg	53	53	24	22	41	22	10	28	60	72	29	0
Mexico[1]	49	53	20	21	0	1	10	7	90	93	a	a
Netherlands	52	54	20	20	16	22	1	4	93	96	6	a
New Zealand	55	58	23	22	25	25	31	22	69	78	0	a
Norway	56	55	23	22	3	2	7	9	82	80	11	12
Poland	56	56	22	21	2	14	a	0	m	85	m	15
Portugal	55	53	21	20	2	13	a	13	84	81	16	6
Slovak Republic[1]	57	53	22	22	7	23	2	3	91	91	6	6
Slovenia	53	55	21	21	4	13	15	16	80	78	5	5
Spain[1]	51	54	21	22	7	9	36	39	53	47	11	14
Sweden	58	56	23	25	9	15	2	14	74	57	24	30
Switzerland	48	50	25	24	15	12	4	2	68	98	28	a
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m
United Kingdom	55	56	22	24	13	11	15	19	82	77	2	4
United States	53	54	20	19	2	3	45	47	55	53	a	a
OECD average	54	54	22	22	10	12	14	16	77	78	9	7
Partner and/or accession countries												
Argentina	57	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria[1]	51	54	23	23	7	9	a	a	86	86	14	14
China	m	m	m	m	m	m	m	m	m	m	a	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	53	54	21	23	4	7	a	a	92	91	8	9
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	a	m
EU25 average	54	55	22	22	10	13	7	10	81	81	11	9
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B4.2. Distribution of tertiary graduates, by level of education and selected field of study (2023)

	Short-cycle tertiary				Bachelor's or equivalent				Master's or equivalent				Doctoral or equivalent			
	Arts and humanities, social sciences, journalism and information	Business, administration and law	Health and welfare	Science, technology, engineering and mathematics (STEM)	Arts and humanities, social sciences, journalism and information	Business, administration and law	Health and welfare	Science, technology, engineering and mathematics (STEM)	Arts and humanities, social sciences, journalism and information	Business, administration and law	Health and welfare	Science, technology, engineering and mathematics (STEM)	Arts and humanities, social sciences, journalism and information	Business, administration and law	Health and welfare	Science, technology, engineering and mathematics (STEM)
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	10	43	16	14	20	27	24	20	11	36	19	21	19	8	18	48
Austria	4	21	4	38	20	21	14	27	18	32	13	26	18	12	14	50
Belgium	1	19	51	23	19	22	27	17	25	24	22	20	20	5	21	48
Canada	11	32	18	25	27	21	13	27	15	29	21	24	24	5	11	51
Chile	2	23	25	24	11	24	21	27	12	34	26	11	27	4	6	48
Colombia	7	45	2	30	18	37	9	24	9	53	6	13	23	9	9	36
Costa Rica	5	36	2	18	8	34	12	18	6	51	10	7	12	9	0	19
Czechia	100	0	0	0	19	19	14	23	18	19	13	24	18	7	11	50
Denmark	14	46	2	22	17	22	30	21	26	24	10	33	19	0	38	39
Estonia	a	a	a	a	22	22	16	25	18	24	12	27	23	7	11	50
Finland	a	a	a	a	12	21	25	28	22	20	15	30	20	8	23	41
France	3	46	12	28	26	34	14	19	14	34	16	26	19	7	4	67
Germany	3	0	8	33	13	27	6	35	23	22	8	35	11	9	31	44
Greece	a	a	a	a	24	19	12	30	27	24	14	22	21	5	19	41
Hungary	3	60	1	14	21	23	6	24	21	28	13	17	30	3	24	32
Iceland	2	0	0	6	28	14	21	18	16	30	15	14	31	4	19	35
Ireland	12	25	16	25	20	23	18	28	13	30	17	24	24	6	18	43
Israel	2	7	2	60	26	18	10	23	21	30	15	12	25	4	14	51
Italy	10	16	0	53	36	20	10	21	29	20	16	24	17	9	13	55
Japan	15	13	23	18	31	26	9	20	11	10	27	42	13	4	41	35
Korea	14	9	19	31	23	14	17	32	22	21	11	24	20	12	15	39
Latvia	2	27	28	12	22	26	11	23	16	29	29	17	16	14	12	52
Lithuania	a	a	a	a	20	24	19	26	18	29	28	18	22	9	14	43
Luxembourg	13	31	32	24	30	26	2	21	8	61	2	18	18	13	0	67
Mexico	2	29	6	48	12	34	13	26	10	41	13	9	12	18	3	16
Netherlands	10	36	15	14	22	27	17	18	27	29	9	24	13	7	42	30
New Zealand	24	25	13	22	23	18	23	22	21	27	12	28	20	8	16	45
Norway	19	2	1	63	19	19	25	16	24	18	12	24	21	4	30	38
Poland	0	1	65	1	17	29	14	19	19	26	19	19	27	8	15	42
Portugal	10	22	11	38	25	22	18	24	17	22	17	31	25	9	13	40
Slovak Republic	53	6	17	10	18	19	17	20	16	22	19	20	20	13	14	40
Slovenia	7	14	3	42	21	18	15	28	13	24	15	27	22	8	25	40
Spain	7	20	24	28	25	20	13	20	14	18	21	15	26	7	19	39
Sweden	12	27	5	45	25	12	27	19	16	15	20	31	11	3	32	49
Switzerland	37	1	31	20	12	27	19	24	21	28	10	25	15	7	27	47
Türkiye	9	30	32	16	28	21	16	20	21	31	6	20	29	14	12	31
United Kingdom	16	30	24	21	32	21	18	24	21	35	13	21	25	7	17	46
United States	46	11	20	16	30	19	17	25	13	26	26	20	21	6	12	42
OECD average	14	22	16	26	22	23	16	23	18	28	16	22	20	8	18	43
Partner and/or accession countries																
Argentina[1]	20	27	15	15	23	20	15	16	13	18	34	4	27	10	3	45
Brazil	59	41	0	0	8	34	19	16	20	11	16	24	20	7	18	29
Bulgaria	a	a	a	a	21	21	8	24	14	26	16	16	27	16	20	23
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	0	0	0	0	17	18	15	31	17	25	13	25	23	3	27	38
India	a	a	a	a	37	17	6	28	39	27	6	22	29	10	9	39
Indonesia	13	13	35	34	22	19	8	19	20	24	8	11	28	15	7	11
Peru	m	m	m	m	13	28	18	26	0	82	18	0	m	m	m	m
Romania	a	a	a	a	19	29	7	31	15	23	20	25	30	11	17	28
Saudi Arabia[1]	1	49	0	44	29	29	9	23	13	27	40	11	48	25	3	12
South Africa[1]	11	51	2	21	16	38	6	15	13	41	13	25	21	21	12	32
EU25 average	14	22	15	24	21	23	15	24	19	26	16	24	21	8	19	44
G20 average	15	27	14	26	24	25	13	23	18	27	17	21	23	11	13	38

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B4.3. Profile of international or foreign students in tertiary education (2013, 2018 and 2023)

Trends in the total numbers and share of international or foreign students and distribution by region of origin

	Number (in thousands)						Share of international or foreign students			Distribution by region of origin						
	All tertiary			Of which: Bachelor's or equivalent	Of which: Master's or equivalent	Of which: Doctoral or equivalent				Africa	Asia	Europe	Latin America and the Caribbean	Northen America	Oceania	Areas not specified
	2013	2018	2023	2023	2023	2023	2013	2018	2023	2023	2023	2023	2023	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	249.9	444.5	467.1	167.9	154.1	20.9	18	27	27	3	86	2	3	1	1	3
Austria	70.9	75.3	87.0	37.7	39.7	8.2	17	17	20	2	9	84	2	1	0	2
Belgium	48.7	53.9	57.3	29.6	21.3	5.1	10	10	10	17	12	57	3	1	0	9
Canada[1]	151.2	224.5	389.1	164.5	53.1	24.1	10	14	21	11	72	8	6	2	0	1
Chile	3.0	5.7	19.9	6.9	4.6	1.6	0	0	1	0	0	1	98	0	0	0
Colombia[1, 2]	3.9	4.8	6.7	3.7	1.2	0.1	0	0	0	0	1	7	89	2	0	0
Costa Rica[1]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	40.1	44.8	56.3	29.8	20.8	5.6	9	14	17	3	20	75	1	1	0	0
Denmark	29.5	33.3	29.7	9.7	13.9	3.7	10	11	10	1	15	77	2	3	1	0
Estonia	1.9	4.4	4.9	1.7	2.4	0.8	3	10	11	9	30	53	4	3	0	0
Finland	21.9	23.7	30.3	15.1	9.9	5.4	7	8	9	10	45	30	3	3	0	9
France	228.6	229.6	276.2	96.2	141.4	25.4	10	9	10	52	22	17	6	2	0	1
Germany	196.6	311.7	423.2	153.8	221.3	48.1	7	10	13	10	44	31	5	2	0	7
Greece[2]	22.1	26.3	26.3	24.9	0.7	0.8	3	3	3	m	m	m	m	m	m	m
Hungary[1]	20.7	32.3	41.7	20.3	18.1	3.1	6	11	14	12	43	41	3	1	0	0
Iceland	1.2	1.4	2.1	0.8	0.8	0.3	7	8	10	4	18	56	4	17	1	0
Ireland	12.9	22.3	30.1	15.2	9.9	4.3	6	10	12	5	46	30	3	16	1	0
Israel	10.3	10.9	13.6	7.0	3.7	1.7	3	3	3	m	m	m	m	m	m	m
Italy	82.6	106.6	106.5	45.7	54.9	5.9	4	6	5	13	41	27	8	2	0	8
Japan	132.4	182.7	181.8	73.2	35.6	18.6	3	5	5	1	94	3	1	1	0	0
Korea[1]	55.5	84.7	127.6	71.2	30.0	18.1	2	3	5	2	94	2	1	1	0	0
Latvia	3.5	7.6	10.1	4.6	5.2	0.2	4	9	13	3	46	50	0	1	0	0
Lithuania	3.9	6.3	11.0	6.1	4.6	0.3	2	5	11	9	28	59	1	2	0	0
Luxembourg	2.9	3.4	4.2	0.7	2.4	0.9	44	48	52	10	15	70	4	1	0	0
Mexico	8.0	7.2	72.9	42.8	22.2	7.1	0	0	1	1	0	39	57	1	2	0
Netherlands[3]	68.9	104.7	169.5	112.0	53.1	m	10	12	18	m	m	m	m	m	m	m
New Zealand	41.2	52.7	36.4	20.5	8.5	4.4	16	20	15	1	77	5	2	7	8	0
Norway	9.2	12.3	14.1	4.7	6.9	2.5	4	4	5	8	40	40	4	4	0	3
Poland	27.8	54.4	89.7	61.2	27.4	1.0	1	4	7	10	20	67	1	1	0	1
Portugal	14.5	28.1	56.8	23.0	21.8	8.2	4	8	13	42	7	17	33	1	0	0
Slovak Republic[1]	10.2	11.6	21.3	13.6	6.7	0.9	5	8	15	1	8	91	0	0	0	0
Slovenia	2.6	3.4	8.5	4.7	2.5	0.8	3	4	11	2	8	89	1	0	0	0
Spain	56.4	70.9	102.2	27.3	45.7	19.7	3	3	4	7	10	34	47	2	0	0
Sweden	25.4	30.9	34.7	7.9	19.8	6.9	6	7	7	m	m	m	m	m	m	m
Switzerland	47.1	54.3	66.2	23.1	27.2	15.9	17	18	20	5	15	69	4	3	0	4
Türkiye[1]	54.4	125.1	301.7	194.0	55.8	11.1	1	2	4	20	71	8	0	0	0	0
United Kingdom	416.7	452.1	748.5	283.0	403.2	49.6	17	18	23	13	68	14	1	4	0	0
United States[1]	772.2	987.3	956.9	338.4	254.8	258.3	4	5	5	6	75	7	8	3	1	0
OECD total	2 949.0	3 935.8	5 081.9	2 142.5	1 805.0	589.7	5	6	7	11	58	18	7	3	0	3
Partner and/or accession countries																
Argentina[1, 2]	75.7	109.2	140.8	71.9	57.3	3.7	2	3	4	0	1	3	94	2	0	0
Brazil[1]	16.5	21.2	25.2	20.8	1.6	2.8	0	0	0	23	10	11	50	5	0	1
Bulgaria	11.6	15.2	19.3	5.7	12.8	0.8	4	6	9	2	16	81	0	1	0	0
China[1]	96.4	178.3	200.9	m	m	m	0	0	0	m	m	m	m	m	m	m
Croatia[2]	0.8	5.0	5.9	2.8	2.7	0.4	1	3	4	1	6	88	1	3	0	0
India[1]	34.4	46.1	45.7	m	m	m	0	0	0	24	67	1	0	7	0	0
Indonesia[1, 2]	7.3	7.7	m	m	m	m	0	0	m	m	m	m	m	m	m	m
Peru[1]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	22.2	29.1	36.2	13.2	22.1	0.9	4	5	7	9	17	72	1	1	0	0
Saudi Arabia[1, 4]	62.1	74.0	64.9	m	m	m	5	5	4	26	69	3	0	1	0	1
South Africa[1]	42.4	42.3	28.7	11.9	6.6	6.9	4	4	3	85	4	5	0	2	0	4
EU25 total	1 027.3	1 334.7	1 513.7	743.7	746.2	155.7	6	8	8	16	28	40	8	2	0	7
G20 total	2 586.6	3 456.7	4 557.6	1 735.2	1 491.7	500.6	2	2	3	12	64	11	8	3	0	1

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B4.4. Profile of tertiary graduates who had a temporary international study or work period (2023)

Number and share of graduates and their distribution by region of destination (2023)

	Number of graduates with credit mobility (in thousands)					Share of those graduates who were not degree mobile	Distribution of graduates with credit mobility by region of destination						
			Of which										
	All tertiary education		Bachelor's or equivalent	Master's or equivalent	Doctoral or equivalent		Africa	Asia	Europe	Latin America and the Caribbean	Northern America	Oceania	Areas not specified
	2016	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	9.4	7.6	3.9	3.4	0.3	68	1	8	78	2	9	1	0
Belgium	m	9.1	4.5	4.5	m	81	5	5	58	3	3	1	26
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	5.6	4.8	2.0	2.6	0.3	76	0	7	87	1	4	0	0
Denmark	8.2	6.4	3.6	2.2	0.3	76	2	14	59	2	17	5	0
Estonia	m	0.6	0.3	0.3	m	59	1	5	91	0	1	1	1
Finland	9.4	4.2	2.7	1.5	0.0	90	1	14	74	2	7	1	1
France	125.1	185.5	45.5	131.4	1.1	73	2	9	61	7	18	2	2
Germany	m	27.1	15.9	10.7	0.5	m	1	12	71	3	10	2	0
Greece	1.7	1.8	1.8	0.0	m	m	0	14	84	1	0	0	1
Hungary	1.9	2.3	1.3	0.9	0.1	m	0	3	96	0	0	0	0
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	3.2	3.2	0.0	0.0	90	0	1	98	0	1	0	0
Israel	m	m	m	m	m	m	m	m	m	m	m	m	m
Italy	28.6	40.1	14.5	20.7	4.8	0	1	4	88	2	5	1	0
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	1.1	0.9	0.5	0.3	0.0	84	0	6	93	0	1	0	0
Lithuania	2.3	1.6	1.1	0.4	0.1	79	0	11	87	0	1	0	0
Luxembourg	0.5	0.4	0.4	0.0	0.0	51	0	2	95	0	3	0	0
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands[1]	32.6	24.5	18.1	6.3	m	78	5	14	56	9	11	4	1
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m
Norway	4.8	4.3	2.9	1.4	0.0	100	6	7	58	1	14	13	0
Poland	0.0	7.7	4.0	3.6	0.1	73	0	6	91	0	1	0	2
Portugal	5.7	5.1	3.2	1.9	0.0	87	1	2	90	5	1	0	0
Slovak Republic	0.8	1.4	0.6	0.7	0.1	89	0	5	95	0	0	0	0
Slovenia	0.4	0.4	0.3	0.1	0.0	0	0	3	96	0	0	0	0
Spain	33.5	40.7	30.0	5.8	3.4	97	0	3	80	4	5	0	8
Sweden	7.6	6.2	2.9	3.0	0.2	88	1	12	66	2	16	3	0
Switzerland[2]	7.7	6.8	3.6	2.7	0.5	70	2	10	71	2	13	1	0
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m	m
United Kingdom	a	a	a	a	a	a	a	a	a	a	a	a	a
United States	m	m	m	m	m	m	m	m	m	m	m	m	m
OECD total	287.1	392.6	166.9	204.6	11.9	71	2	8	69	5	12	2	2
Partner and/or accession countries													
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	1.0	0.7	0.5	0.3	0.0	78	0	9	90	0	1	0	0
China	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	1.5	1.2	0.3	0.8	0.1	0	0	3	95	0	1	0	0
India	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	2.4	1.9	1.2	0.7	0.0	82	0	5	94	1	0	0	0
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 total	279.5	385.3	162.4	202.1	11.5	70	2	8	69	5	12	2	2
G20 total	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

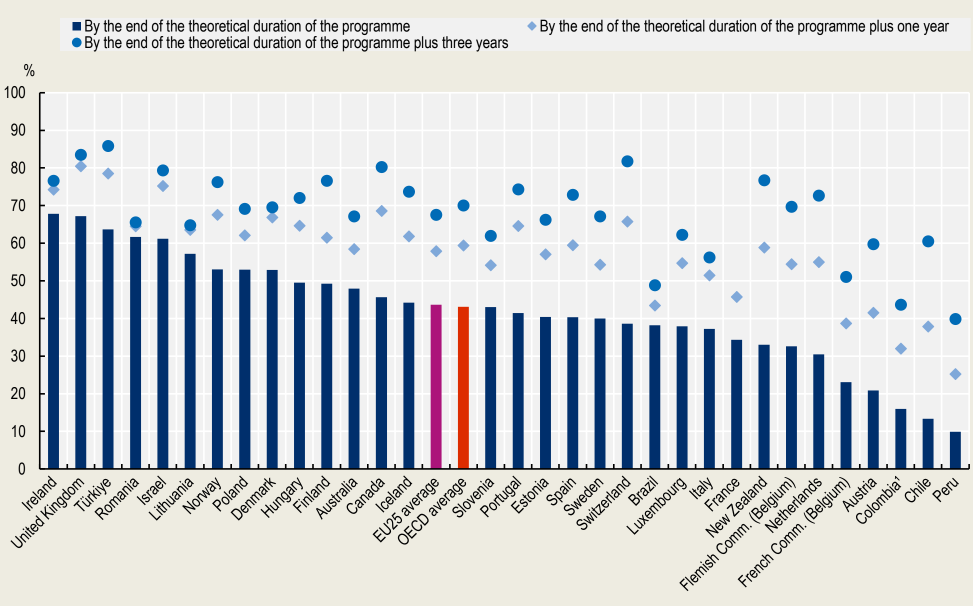
Chapter B5. Who is expected to complete tertiary education?

Highlights

- On average across OECD countries and other economies, only 43% of students who start a bachelor's programme complete a degree at any tertiary level within the theoretical duration of their programme. This rate increases to 59% when allowing for one additional year and reaches 70% three years after the end of the theoretical duration.
- First-year drop out rates exceed 20% at bachelor's level in several systems, including Brazil, Colombia, the French Community of Belgium, Luxembourg, Peru and Romania.
- By the end of the theoretical duration of their programme, 42% of bachelor's entrants have graduated from that or another bachelor's programme on average, 1% have completed a short-cycle tertiary programme, 38% remain enrolled and 20% have left tertiary education.

Figure B5.1. Completion rates of new entrants to bachelor's programmes, by timeframe (2023)

Completion rates of full-time students at any tertiary level



1. Year of reference differs from 2023.

For data, see Table B5.1. For a link to download the data, see Tables and Notes section.

Context

Completion rates in tertiary education are a key measure for understanding how effectively education systems support students from entry to graduation. They provide insights into the functioning and efficiency of tertiary programmes, highlighting whether systems are enabling students to complete their studies within a reasonable timeframe. For policy makers, this indicator is particularly relevant, as studying for extended periods or failing to complete a programme can carry significant financial and social costs for both individuals and society. High drop out rates or delays in completion may indicate a misalignment between student needs and programme offerings, challenges in academic preparation or issues related to guidance and support services. They may also reflect a mismatch between the expectations and skills of new entrants and the actual demands of the programmes. When students enrol in courses that do not align with their competencies or goals, the risk of non-completion increases significantly (Archer, Godec and Holmegaard, 2023[1]; Colyar, Chatoor and Deakin, 2023[2]).

Importantly, non-completion or delayed completion does not always reflect failure. Students may leave their programmes for diverse reasons: they might switch fields after discovering new interests, pause their studies due to personal circumstances or take advantage of early job opportunities. Some may also have entered tertiary education without a clearly defined academic goal, using initial enrolment as a way to explore different study options. In such cases, flexible pathways into different programmes and levels can be seen as an opportunity rather than a weakness of the system.

Understanding the factors that shape completion requires considering students' socio-economic background, academic preparation and the structure of tertiary systems themselves, including entry requirements, institutional selectivity and support mechanisms. These factors interact in complex ways, influencing whether students graduate "on time", after a delay or not at all.

By exploring how completion rates vary across education levels, fields of study, gender and type of institution, this chapter sheds light on potential policy levers to improve student outcomes. It also highlights the importance of balancing flexibility with efficiency, and of designing tertiary education systems that support diverse student pathways and aspirations.

Other findings

- On average across OECD countries, completion rates three years after the theoretical duration reached 80% among bachelor's students in health and welfare, 71% in arts, humanities, social sciences, journalism and information, and 68% in STEM fields, highlighting significant variation by field of study.
- Women are more likely than men to complete their bachelor's studies: 48% of female entrants graduate on time, compared to 37% of male entrants. After three additional years, the gap remains the same (75% versus 63%).
- In almost all countries that reported completion rates for bachelor's programmes of different durations, longer programmes tend to have higher completion rates.

Note

Completion and attainment rates are two distinct measures. Completion rates, as presented in this chapter, refer to the percentage of students who enter a tertiary programme and graduate from it within a specified timeframe. In contrast, attainment rates reflect the share of the population that has achieved a certain level of education, regardless of when or where the qualification was obtained (see Chapter A1). They represent the relationship between all graduates – both recent and from previous years – and the total population.

Analysis

This chapter presents data on the completion of tertiary education by the end of the theoretical duration of programmes and one and three years later. These completion rates are calculated using true cohort data. True cohort completion rates correspond to the share of students from a specific entry cohort who graduate within a particular timeframe. This is the preferred methodology for analysing completion rates, but only countries with longitudinal surveys or registers are able to provide such information. Panel data may be available in the form of an individual student registry (using unique personal identification numbers for students) or a cohort of students used to conduct a longitudinal survey. In earlier editions of *Education at a Glance*, completion rates were also calculated using cross-cohort data, but these estimates were not comparable with true cohort measures and often overestimated completion rates. In recent years, many countries have strengthened their data collection systems, enabling a more consistent use of true cohort data in this chapter.

Completion rate by timeframe

Bachelor's programmes

On average across OECD countries and economies, 43% of students complete their bachelor's programme within the theoretical duration, although completion rates vary substantially across countries. The highest rates, where more than 60% of all bachelor's entrants complete a tertiary degree (at any level) within the expected timeframe, are in Ireland, Israel, Romania, the Republic of Türkiye and the United Kingdom. Several other countries, including Denmark, Hungary, Lithuania, Norway and Poland, report slightly lower rates but still around the 50-60% range. At the lower end of the spectrum, Austria, Chile, Colombia, the French Community of Belgium, and Peru show notably lower rates of on-time completion (below 25%) (Figure B5.1). These cross-country differences may reflect a variety of contextual factors, including the structure and official length of bachelor's programmes, the availability and accessibility of student support services, the level of public or private funding and financial aid, the flexibility of study pathways (such as the availability of part-time study or the possibility of taking gap years), and broader labour-market conditions and incentives for timely graduation. At the individual level, academic readiness at entry and prior success in upper secondary education can be the determining factors behind the prompt completion of tertiary studies.

On average across OECD countries and economies, completion rates for bachelor's entrants increase by 16 percentage points - reaching 59% - when the timeframe is extended by one additional year after the theoretical programme duration. This indicates that a considerable share of students who do not graduate within the expected period will nevertheless be able to complete their studies shortly afterwards. The increase in Chile, the Netherlands, New Zealand and Switzerland is relatively large (around 25 percentage points or more) over this extended timeframe. In contrast, in some countries where on-time completion rates are already relatively high, such as Ireland and Romania, the additional gain from extending the observation period by one year tends to be more modest. These differences highlight broader cross-country differences in completion dynamics: in some systems, most students either graduate on time or not at all, whereas in others a significant share will complete their studies after some delay (Figure B5.1).

The data on completion rates by the end of the theoretical programme duration correspond to a graduation period of June to December 2020. During this period, and in the months leading up to it, many students were experiencing disruptions due to the COVID-19 pandemic, as universities shifted to remote learning, exams were postponed or cancelled and students faced challenges such as limited Internet access, economic hardship and decreased academic support. While some students were able to complete their exams on line, others faced delays that postponed their graduation. In Denmark, for instance, students reported challenges in maintaining motivation, adapting to lockdown measures and managing an increased risk of dropping out. The Netherlands also experienced major disruptions, with delays in student progress and a noticeable decline in completion rates, despite institutional efforts such as deadline extensions and the transition to online assessments. In contrast, Australia and Sweden managed the shift to online learning more effectively, maintaining retention and completion rates at pre-pandemic levels.

Studies suggest that completion rates remained relatively stable in many systems. In Norway and Sweden, for example, early evidence pointed to consistent graduation outcomes and student performance throughout the pandemic period. In contrast, in Hungary and the Slovak Republic, the research highlights inequalities and challenges in student progression, particularly during the first year of the pandemic (See Box B5.2 for more discussion on the impact of COVID-19 and differences in completion rates between 2020 and 2023).

Extending the observation period to three years beyond the theoretical programme duration generally leads to a further increase in completion rates, as students who required additional time to balance study commitments with work or personal responsibilities complete their programmes. However, in almost all systems, the incremental gain due to these two additional years is significantly smaller than that achieved by extending the period by only one year. This suggests that most students who take longer to complete their degree than the expected timeframe do so relatively soon after the official programme end date. The added time brings diminishing returns, as students who have not completed a tertiary degree within one additional year may be more likely to withdraw without a qualification (Figure B5.1).

Short-cycle tertiary and long first degree master's programmes

Only 18 OECD and partner countries and economies have true cohort data available for short-cycle tertiary programmes and, as with bachelor's programmes, completion rates at this level vary widely. In Chile, Israel, Slovenia and Peru, less than 25% of students who enter a full-time short-cycle programme graduate from any tertiary programme within the theoretical duration of the programme. In France, more than 70% of students graduate within this timeframe. As with bachelor's programmes, completion rates increase in all countries after three additional years, but especially in those where completion rates within the theoretical duration are lower. The completion rate almost doubles in Canada (from 32% to 62%) and more than doubles in Chile (from 25% to 52%) and Israel (from 22% to 57%) (Table B5.1).

In most countries, completion rates of short-cycle tertiary entrants are higher than those for bachelor's entrants by the end of the theoretical duration, with only eight countries having a lower rate. The difference is greatest in Israel, where the completion rate of bachelor's programmes is 40 percentage points higher than for short-cycle tertiary programmes. However, bachelor's completion rates tend to be higher than short-cycle tertiary rates three additional years after the end of the theoretical duration of the programme. Only five countries have higher completion rates for short-cycle tertiary students than bachelor's students over the longer timeframe (Table B5.1). In order to put these differences into context, however, it is important to understand the distribution of students in each tertiary level. For example, Austria is the only OECD country where more first-time entrants to tertiary education enrol in short-cycle programmes (43%) than in bachelor's programmes (39%) (see Chapter B4).

Master's long first degree programmes have a longer theoretical duration than bachelor's programmes, and completion rates within that timeframe tend to be higher. In 8 out of the 13 countries with available data, completion rates were higher for master's students than for those entering bachelor's degrees by the theoretical end of their programmes. Completion rates three years after the theoretical duration were higher in all countries for students who entered master's long first degrees than for bachelor's students, ranging from 55% in Peru to 96% in Republic of Türkiye (Table B5.1). This may be due to the selection processes for entry to master's long first degree programmes, as well as students' own self-selection, given the greater complexity of the course content. In Spain, for example, some long first degree programmes in fields such as medicine, architecture or veterinary science have higher admission criteria and require strong academic performance in upper secondary education and university entrance exams. Box B5.1 provides a more detailed discussion of completion rate differences between programmes of shorter and longer duration.

Policies to increase completion rates in tertiary education

In recent years, many countries have implemented policies aimed at increasing tertiary completion rates. A common approach is to make the financing of institutions conditional to some extent on student completion rates. In Estonia, for example, 20% of the funding for tertiary institutions is performance based and allocated according to five criteria, one of which – student completion within specified timeframes – is relatively significant (OECD, 2019[3]). In Denmark, a significant share of higher education funding is tied to indicators such as study duration, graduate employment rates and student satisfaction. Institutions can lose up to 3.75% of core funding if average completion time exceeds programme duration by over a year – highlighting the emphasis placed on timely graduation within the funding model (OECD, 2021[4]). Similar conditional funding mechanisms exist in Finland, Israel and Lithuania.

In other countries, completion rates are taken into account in the financing provided directly to students. In Norway, for example, students may have up to 40% of their student loans converted into grants if they progress through their studies without delays and meet the relevant income and residence requirements (Eurydice, 2023[5]). Since academic year 2019/20, students in Norway have also been obliged to complete their overall degree in order to receive the full loan-to-grant conversion. In Brazil, specific financing has been provided to institutions in the past in order to help ensure that students from disadvantaged backgrounds complete their degree without excessive delays, but funding for these programmes have recently diminished for budget reasons, especially following the onset of the COVID-19 pandemic. In Portugal, a EUR 7 million pilot project involving a group of universities is using AI to develop models to identify drop out risk indicators. The initiative supports early intervention to improve student retention in higher education (European Comission, 2024[6]).

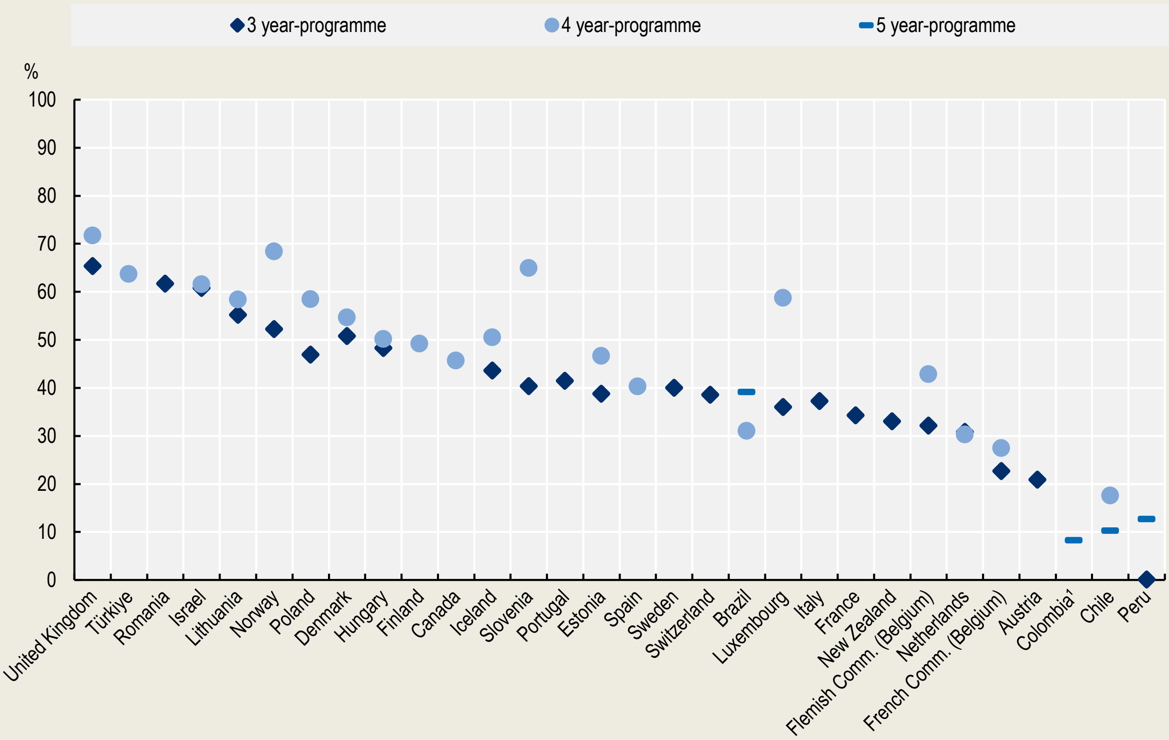
Other policies focus on helping students make better choices about their field of study, thereby reducing the number of cases where students transfer to other courses or leave tertiary education entirely due to a poor fit with their original programme. In the Flemish Community of Belgium, for example, a study guidance tool called “Columbus” has been established for use in secondary schools to guide students’ choices about what to study in higher education (see Annex 3). In the United Kingdom, all government-backed careers information has been gathered onto the National Careers Service website to help young adults understand the careers landscape and find the education programmes with the right fit (UK Government, 2025[7]).

Box B5.1. Bachelor’s completion rates by programme duration

Generally, bachelor’s programmes across countries have a theoretical duration of three to four years, but there are notable exceptions. In Luxembourg, one bachelor’s programme lasts only two years, while in Brazil, Chile and Colombia, some bachelor's programmes extend to five or even six years. For short-cycle tertiary programmes, Chile, Colombia, Israel and Peru report durations of three years, while Israel and the United Kingdom have also one-year programmes at that level. At the long first-degree master’s level, Chile and Peru report programmes lasting up to seven years, whereas Sweden reports some shorter programmes with a theoretical duration of four years.

In this chapter, completion rates for programmes of varying durations have been aggregated by level of education. Nevertheless, examining the potential impact of programme length on completion provides additional insight. While it might be assumed that longer programmes were associated with a higher risk of students dropping out and therefore lower completion rates, the data suggest otherwise. In almost all countries that reported completion rates for bachelor's programmes of different durations, longer programmes tend to have higher completion rates. In some cases, the gap is substantial: in Luxembourg and Slovenia, the completion rate for four-year programmes exceeds that of three-year programmes by more than 20 percentage points. Only Chile reports lower completion rates for longer programmes than for shorter ones (Figure B5.2).

Figure B5.2. Completion rates of bachelor's new entrants by the end of theoretical duration of their programme, by duration of programme (2023)



1. Year of reference differs from 2023.

For data, see Survey on tertiary completion rate database.

The reasons for these higher completion rates are varied. In some countries, programme durations differ depending on the field of study, entry requirements and other factors. In Norway, four-year bachelor's programmes in teacher and music education differ from standard three-year degrees and have stricter admission requirements such as auditions or specific grade criteria. These programmes also lead directly to professions, setting them apart from other bachelor's programmes. Similarly, in Slovenia, academically oriented four-year bachelor's or equivalent programmes, mainly in education, social sciences and the arts, have higher completion rates than three-year programmes, partly due to differences in students' prior education. These longer programmes attract students with general upper-secondary backgrounds and often require entrance exams, suggesting higher motivation and commitment. On the other hand, in many countries, the fourth (or even fifth) year represents an additional stage in the study programme, pursued only by students who have successfully completed the first three years without delay. In Australia for example, students may follow a four-year bachelor's degree and continue to a fifth year under the bachelor's honour degree programme or enrol in a cluster of qualifications comprising a bachelor's and bachelor's honours degree.

Drop out rates by timeframe

To better understand student trajectories, completion data should be considered alongside drop out patterns, both after the first year of study and at later stages. Examining when and why students disengage from their studies provides valuable insights that can enable policy makers and education institutions better target early interventions.

Drop out rates after the first year of study refer to the proportion of students who are no longer enrolled and have not obtained a degree by the start of the second academic year. This period often represents a critical juncture in students' educational journeys, during which many discover that their chosen programme does not meet their expectations or that balancing study with work, family or other commitments is too difficult. Some systems, such as Brazil, Colombia, the French Community of Belgium, Luxembourg, Peru and Romania exhibit relatively high first-year drop out rates at bachelor's level (20% or more) (Figure B5.3).

These patterns may reflect a range of factors, including prior academic achievement and financial conditions faced by students. In Colombia, the introduction of SPADIES, a comprehensive student retention tracking system, has shown the importance of examining factors behind students dropping out (Ministerio de Educación Nacional, 2009[8]). The data from Colombia indicate that academic readiness at entry plays a crucial role in students dropping out, potentially to a greater extent than previously understood, outweighing financial factors. In Estonia, the most common reason for students dropping out after their first year is a mismatch between their chosen field of study and their interests, strengths, or career plans. In addition, students with lower upper secondary school examination scores are more likely to leave their programmes early (Jaggo, 2020[9]).

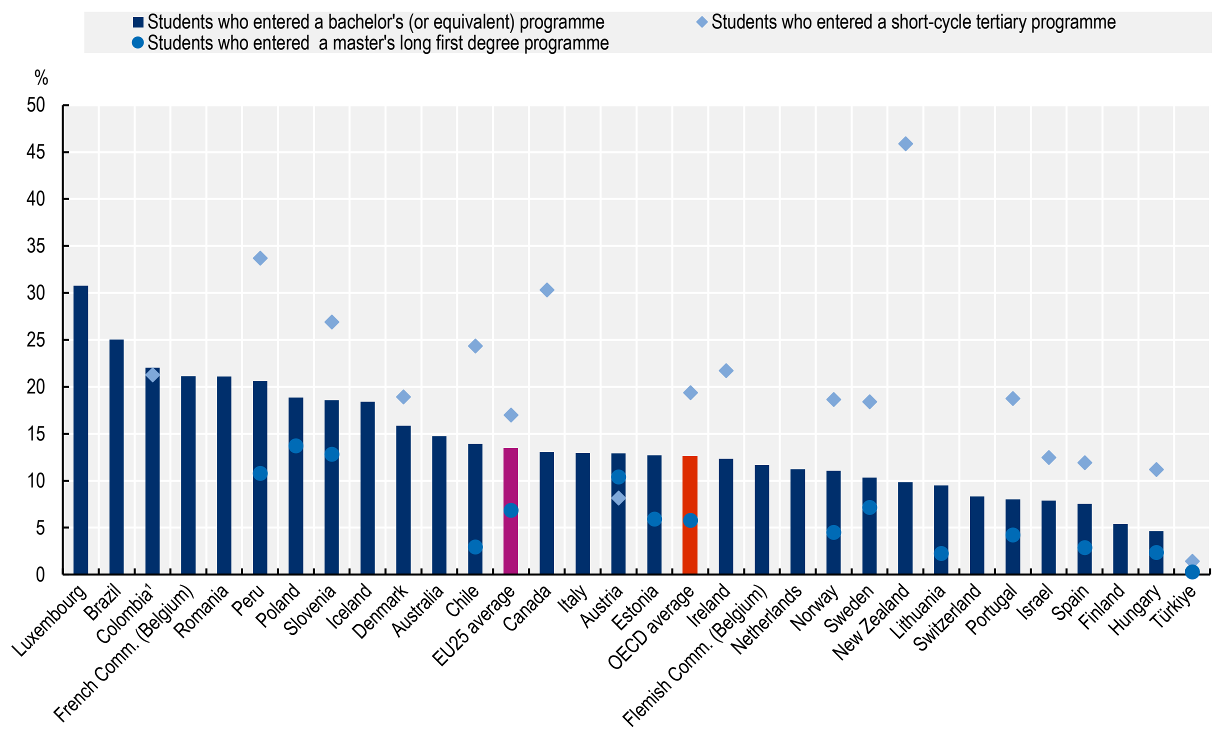
After the first year, the number of students who have dropped out continues to accumulate throughout the duration of tertiary programmes. Although the rate of attrition tends to increase more gradually after the first year, some countries with moderate first-year drop out rates, such as Lithuania and Sweden, may still see significant cumulative numbers dropping out over time (Table B5.4, available on line). In Sweden, later-stage drop out is most common among students with weaker academic backgrounds, particularly those with low grades from upper secondary education (Swedish Higher Education Authority, n.d.[10]). In contrast, countries such as Israel, Portugal, Spain, Switzerland and Türkiye, which also record relatively low drop out rates in the first year, tend to experience either a steady pace of attrition or a plateau, suggesting they have more effective support mechanisms and interventions that help students remain engaged. An additional factor influencing attrition patterns is the timing of high-stakes examinations. In some systems, these assessments are scheduled early in the programme and serve as a filter, quickly identifying students who do not meet academic expectations. Other systems allow students to progress further before major assessments occur, often after students themselves recognise they will not be able to earn the required credits. These structural differences can influence whether students drop out early or late. It is important to note that early withdrawal can sometimes be preferable, as it may reduce the time and resources expended on an ultimately uncompleted programme. Thus, effective systems not only support continued engagement but also help students make timely, informed decisions about their educational paths.

The risk of dropping out from tertiary education is unequally distributed across student populations and is influenced by a variety of social and economic factors. These disparities became more pronounced during the COVID-19 pandemic. In Colombia, economically disadvantaged students also faced higher drop out rates, even when they entered higher education with strong academic preparation. This highlights the need for comprehensive approaches that address both academic and financial support. In Sweden, while overall drop out rates among new entrants remained stable during the pandemic, there was an increase among students from less advantaged educational backgrounds, raising concerns about equitable access in the context of remote learning. In New Zealand, the effects of the pandemic varied across types of institutions and population groups, with particularly pronounced challenges for older students and those attending Wānanga – tertiary institutions that focus on Māori values and knowledge (Earle, 2024[11]). These examples reinforce the importance of tailored and inclusive policy responses that address the specific needs of vulnerable and diverse student populations in tertiary education.

Drop out rates by level of education

Tertiary programmes vary considerably in their structure, purpose and duration (see Chapter B4). Short-cycle programmes typically span two years, bachelor's programmes last three to four years, while long first degree programmes at the master's level may last five years or more. Given these differences, comparing drop out rates after the first year of study can provide more meaningful insights than overall completion rates or attrition over extended timeframes. The share of students who drop out after the first year can serve as an indicator of the extent to which students' skills, expectations and goals align with the content and demands of the programme, as well as with their perception of its relevance for future career or study opportunities. As shown in Figure B5.3 drop out rates after one year are considerably higher among students who entered short-cycle programmes and consistently lower for long first degree master's programmes compared to bachelor's programmes. These patterns underscore the importance of examining how programme structure, student support services and entry requirements influence early student attrition in tertiary education.

Figure B5.3. Drop out rates after the first year of tertiary education, by level of education entered (2023)



1. Year of reference differs from 2023.
For data, see Table B5.1. For a link to download the data, see Tables and Notes section

Long first degree master's programmes generally report the lowest drop out rates after one year, averaging around 6% across OECD countries and economies. These programmes tend to be more selective, and students are often better academically prepared, contributing to higher retention levels. In Hungary, Lithuania and Türkiye, the proportion of students who leave during the first year is lower than 3%, while in Poland and Slovenia it exceeds 12%.

Short-cycle programmes show notably higher drop out rates in some countries. On average, 19% of students enrolled in short-cycle programmes across OECD countries leave within the first year. In New Zealand, the figure reaches approximately 46%, compared to around 10% for students in bachelor's programmes. This gap may reflect the disproportionate impact of the COVID-19 pandemic, as short-cycle programmes often rely on hands-on or vocational content that proved more difficult to deliver remotely. Colombia also reports high first-year drop out rates, around 20% in both short-cycle and bachelor's programmes, indicating a consistently elevated level of attrition across programme types. In contrast, Hungary, Israel, Spain and Türkiye report relatively low drop out rates for both short-cycle and bachelor's programmes, suggesting stronger retention mechanisms and student support systems.

These findings should be interpreted with caution. In many countries, enrolment in short-cycle or long first degree master's programmes is relatively limited, which may affect the stability and comparability of these indicators. Differences across countries may also reflect broader national contexts, including admission criteria, labour-market structures and the role of tertiary education in the wider education and training ecosystem.

Several countries have conducted government-backed studies to examine the personal, economic and academic factors behind students dropping out from tertiary education. Longitudinal German surveys show that 15% of students drop out by the third year, mainly due to poor programme fit, high workload with little support and financial strain, especially among older students, part-timers and those without a clear career path (DHZW, 2022[12]). A Hungarian qualitative study found that dropping out and delaying graduation in higher education often stem from poor institutional fit, intensive work or sports commitments and peer influence, though exact drop out-rates remain unclear due to inconsistent methodologies (Bocsi et al., 2019[13]). In Peru, the COVID-19 pandemic notably increased drop out rates due to technical and connectivity issues, financial hardship and family care responsibilities. Female and rural students were disproportionately affected by the pandemic's negative impacts (Government of Peru, 2021[14]).

In many countries, governments have investigated the unique socio-economic, academic and psychological challenges driving drop out rates among specific groups of students, aiming to improve their retention in higher education. A review of Norwegian studies found that disadvantaged students are especially vulnerable to dropping out due to mental health struggles, lack of belonging and poor study planning. These challenges are best addressed through early mental-health screening, integrated study-skill workshops and peer-supported "study-cafés" (Hovdhaugen, 2019[15]). A study in Finland found that financial debt, failed courses and activity on the university's online learning platform were the strongest predictors of students dropping out, with their importance changing over time. Although demographic data had less predictive value overall, the findings emphasise the need for early and late-stage interventions, especially for disadvantaged students with low academic performance or poor engagement (Vaarma and Li, 2024[16]).

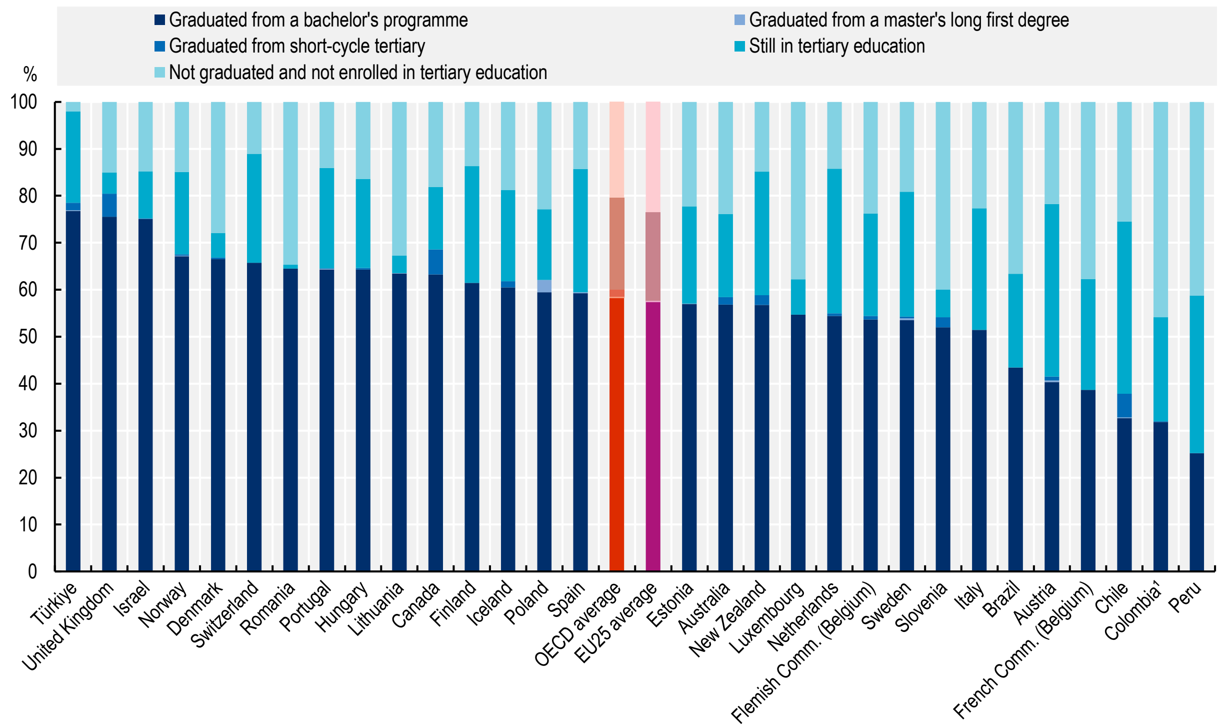
Pathways through tertiary education

In addition to examining students' completion rates, it is important to consider the different pathways they take through tertiary education. This provides insights into the flexibility and responsiveness of education systems and helps shed light on the trajectories of students who do not complete their original programme. Key questions include whether these students are still enrolled, have transferred to another tertiary programme or have left the education system altogether.

On average across OECD countries and economies with available data, 43% of students who entered a bachelor's programme graduated from that or another bachelor's programme by the end of the theoretical duration. An additional 1% had transferred and graduated from a short-cycle tertiary programme, 38% remained enrolled in tertiary education, although not necessarily in their original programme, and 20% had left the system without a qualification (Table B5.4, available on line).

Although only a small share of bachelor's students transfer into different tertiary programmes, typically in the low single digits, this highlights the availability of alternative educational pathways. In countries such as Canada, Chile and the United Kingdom, a modest but visible proportion of students who had started bachelor's programmes had transferred into short-cycle tertiary programmes one year after the theoretical end of their programme. These tend to be more practice-oriented and specialised and could offer a better fit for students whose initial programme did not align with their interests or career plans. In other cases, students move into more advanced programmes. For example, in Poland, some students transfer to long first degree master's programmes, reflecting opportunities for academic progression and pursuit of more specialised qualifications (Figure B5.4 and Table B5.4, available on line).

Figure B5.4. Status of new entrants to bachelor's programmes one year after the theoretical end of their programme (2023)



1 Year of reference differs from 2023.
For data, see Table B5.2. For a link to download the data, see Tables and Notes section

Over the following three years, many of those who were still studying either graduate or exit the system. Three years after the theoretical duration, on average, 68% of students have completed a bachelor's programme, 2% a short-cycle tertiary programme and 1% a long first degree master's programme. Around 8% remain enrolled, while 23% are no longer participating in tertiary education (Table B5.4, available on line).

Access to alternative tertiary pathways often hinges on whether prior credits can be transferred, yet recognition practices vary widely. Institutional autonomy leads to diverse criteria across and within countries and economies, affecting students' ability to switch programmes. For example, in Brazil credit recognition for prior learning is legally permitted and relatively common, but each university sets its own criteria, examining subject compatibility, grades, time elapsed and internal rules. In the French Community of Belgium, credit-transfer decisions (e.g. moving from one bachelor's programme to another) are made on a case-by-case basis by disciplinary juries. In Estonia, the VÕTA process enables the recognition of prior formal, non-formal and informal learning – including work experience – for academic credit or professional qualifications. It streamlines study paths for learners and helps institutions engage with a more diverse, experienced student body (Republic of Estonia, 2024[17]).

Even in systems where transitions between programme types remain limited, the availability of such alternative routes plays an important role in supporting student to remain in tertiary education. For some students, changing programmes allows for a better match with their learning needs, preferred academic environment or professional goals. These flexible options may help reduce drop out rates by providing opportunities to reorient towards more suitable forms of study or shorter qualification pathways.

Research in Australia also shows that partial completion of higher education can still yield significant benefits for students. Many individuals who do not complete their bachelor's programmes go on to attain vocational qualifications and often earn more than those who never enrolled in a bachelor's programme. Moreover, students who leave university before graduating report skill gains, career clarity, social connections or employment benefits. These findings challenge the traditional binary framing of higher education outcomes as either success (completion) or failure (non-completion), suggesting the need for a more nuanced understanding of student trajectories and the broader value of participation in higher education (Luckman and Harvey, 2018[18]; Cunninghame and Pitman, 2019[19]).

To further support student success and ensure that tertiary education remains responsive to societal and labour-market needs, many countries are strengthening the alignment between education and employment. This includes fostering closer ties between higher education institutions and industry through curriculum co-design, work-based learning opportunities such as internships and collaborative research or innovation projects. These partnerships not only enhance the relevance of academic programmes but also create more structured and purposeful transitions for students – whether they are continuing in their original programme or shifting to a new one better matched to emerging job market demands. Complementing these efforts, governments are also introducing policy measures that reinforce the link between education and employability. For example, Ireland's Micro-Credential Course Learner Fee Subsidy supports short, targeted courses in priority skill areas such as renewable energy, sustainability, artificial intelligence and cyber security by offering subsidies of up to 80% on fees (HEA, 2024[20]).

Completion rate by gender

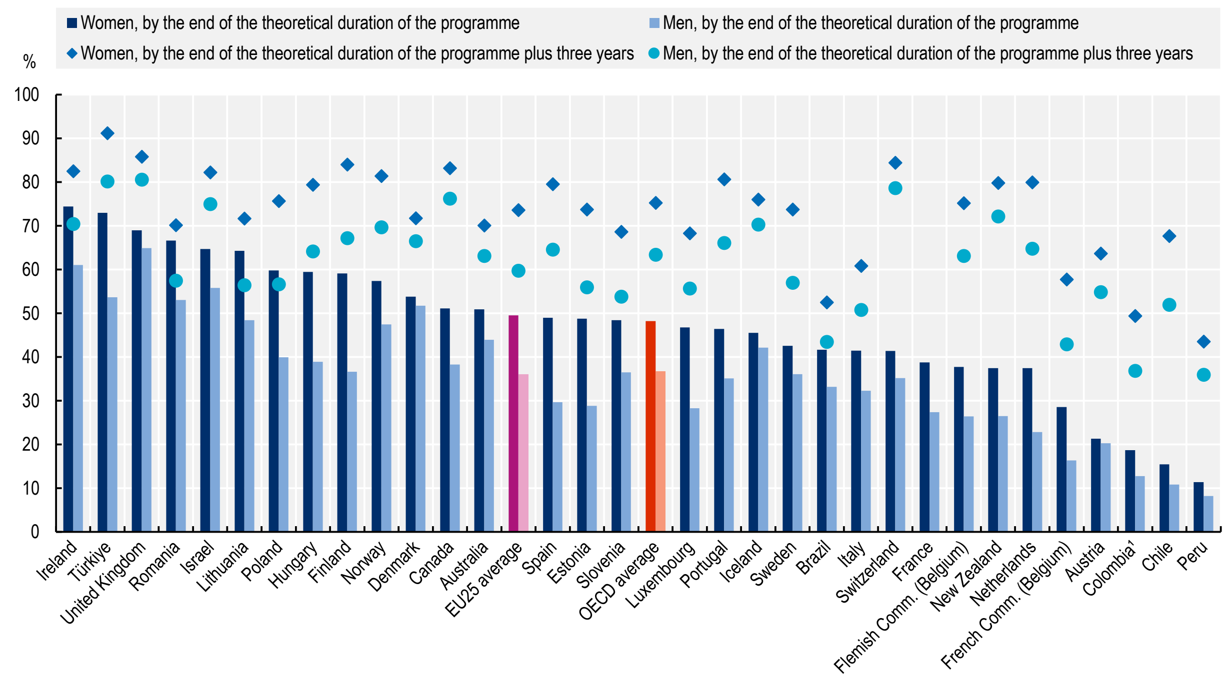
In every country and economy with available data, women in bachelor's programmes have higher completion rates than men. On average across countries, 48% of female entrants and 37% of male entrants to bachelor's programmes graduate within the theoretical duration. The average gap remains similar after allowing three additional years, as the completion rate increases to 75% among women and 63% among men (Figure B5.5).

Some countries have a narrower gender gap than others. The difference in completion rates between women and men within the theoretical duration is below 5 percentage points in Austria, Chile, Denmark, Iceland, Peru and the United Kingdom for students in bachelor's programmes, but 20 percentage points or more in Estonia, Finland, Hungary and Poland. In 22 out of 31 countries and economies with available data, the gender gap in completion rates of bachelor's students did not change greatly after three years following the theoretical end of programmes, with differences of less than 5 percentage points. Of the remaining countries, the gender gap widened in Chile and Sweden after three additional years, but it narrowed in Türkiye (Figure B5.5).

National conscription policies, which often apply differently to men and women, may help explain some of the wider gender differences in completion rates although students tend to be exempted from military or alternative service while enrolled in higher education, or are required to complete it before beginning their studies. In Finland, all male citizens aged 18 to 30 must perform military or alternative service, usually between the ages of 19 and 20, while women may choose to do so voluntarily. This may partly explain why 59% of women entering bachelor's programmes complete their studies on time, compared to 37% of men. The gender gap in Finland narrows from 22 to 17 percentage points when considering a longer timeframe. In Estonia, where military service is also mandatory for men only, completion rates by the end of the theoretical duration are 49% for women and 29% for men. However, unlike in Finland, the gender gap does not narrow significantly over the following three years, suggesting that conscription is not the sole driver of the difference in completion rates (Figure B5.5).

Differences in the completion rates of men and women may also be partly explained by the different returns to tertiary education by gender. Although employment rates are higher for both men and women with tertiary education than those with upper secondary or post-secondary non-tertiary attainment, the gains differ. On average across OECD countries, employment rates for tertiary-educated men are only 5 percentage points higher than for those with upper secondary or post-secondary non-tertiary attainment, compared to a 10 percentage point difference for women. This suggests that women may experience greater employment gains from completing tertiary education although they tend to benefit less in terms of earnings, as the financial returns to tertiary education are generally lower for women than for men (see Chapter A3).

Figure B5.5. Completion rates of new entrants to bachelor's programmes, by gender and timeframe (2023)



1. Year of reference differs from 2023.

For data, see Table B5.2. For a link to download the data, see Tables and Notes section.

Completion rate by type of institution

In most OECD countries, tertiary education is offered in both public and private institutions (OECD, 2025[21]). In public institutions, a public agency has overall control over the general policies and activities of the institution including staff appointments. Private institutions may be managed by non-governmental organisations or by a governing board, most of whose members are not selected by a public agency. However, there can be significant differences in the ways in which private institutions are regulated and managed (UNESCO-UIS/OECD/Eurostat, 2024[22]). In the United Kingdom, for example, all higher education institutions are private but receive most of their funding from the government while in many OECD countries with significant shares of students attending private institutions there are no such government-dependent private institutions (OECD, 2025[21]).

Most private higher education institutions function on a not-for-profit basis, so surplus revenue cannot be paid to their owners (OECD, 2019[23]). However, there have been increasing numbers of for-profit private institutions emerging in some OECD countries (Shah and Sid Nair, 2013[24]). Some research suggests that for-profit institutions may be more responsive to market demand through their ability to quickly adapt their programme offerings to meet students' and employers' needs (Gilpin, Saunders and Stoddard, 2015[25]); however, they have also been criticised for being focused on financial gain at the expense of students' educational outcomes (Hodgman, 2018[26]).

Completion rates by the end of the theoretical duration of a bachelor's programme often differ significantly between public and private institutions. In some countries, students enrolled in private institutions are less likely to graduate on time. For example, in Denmark and Estonia, on-time completion rates are more than 20 percentage points lower in private institutions than in public ones. These findings should be interpreted with caution, as the share of students enrolled in private institutions is very small in some countries. This is the case in Denmark, for example, where there are very few private institutions and they tend to cater to students with specific profiles. In contrast, private institutions outperform public ones by over 20 percentage points in Austria, Finland and New Zealand. In other countries, such as the Netherlands, Poland and Portugal, the difference between sectors is minimal (2 percentage points or less), suggesting comparable effectiveness in supporting timely graduation across both public and private providers (Table B5.2).

When extending the observation period to three years beyond the theoretical duration, the gap in completion rates between public and private institutions often narrows. This indicates that students in both sectors – particularly those who may have taken longer to progress – tend to catch up over time. In Denmark, for example, private institutions experience a substantial increase in completion rates over the extended period, reducing the earlier disparity. Estonia shows a similar trend, with private institutions making larger gains over time, although public institutions also improve and continue to maintain a moderate lead in overall completion rates (Table B5.2).

Several factors can help explain the differences in completion rates between public and private institutions, including admission criteria, programme characteristics, study conditions and financial considerations. Admission requirements are one possible source of divergence. Where entry into higher education is more selective, students are likely to have stronger academic preparation, which may increase their chances of progressing and graduating on time. For example, in many public institutions in Austria, students do not need to pass an admission exam to start a study programme (OECD/European Union, 2019[27]) whereas more selective entry procedures for private institutions may result in better-prepared student cohorts.

The organisation and quality of teaching and learning may also play a role. In Austria, survey data suggest that students enrolled in private universities and universities of applied sciences are more likely to rate the quality of teaching and the structure of their courses positively than those in public universities. These students also tend to report a higher intensity of study, which may contribute to higher on-time completion rates (Zucha, Engleder and Rieder, 2023[28]; Haag et al., 2024[29]).

Differences in programme orientation and specialisation can further affect completion rates. In New Zealand, for instance, private higher education expanded after 1989 into more specialised and professionally oriented areas such as business and information and communication technologies (ICT). This occurred alongside a well-established public sector that had long provided traditional academic and vocational education through universities, polytechnics, and colleges of education (Xiaoying and Abbott, 2008[30]). Students in these vocationally focused programmes may be more motivated to complete their studies on time, as their enrolment tends to be driven by specific career goals.

Financial incentives and the cost of study may also influence completion rates. In systems where tuition fees are higher – often more common in private institutions – students may face greater financial pressure to complete their studies within the theoretical duration. Chapter C5 provides a more detailed discussion of how tuition fees and financial aid mechanisms affect student behaviour and outcomes.

Completion rate by field of study

Completion rates vary significantly by field of study. On average across OECD countries, 80% of full-time bachelor’s students who entered the field of health and welfare had graduated from a tertiary programme three years after the theoretical duration. This compares to 71% in arts, humanities, social sciences, journalism and information, and only 68% in science, technology, engineering and mathematics (STEM) fields. These differences are especially pronounced in some countries: in Austria, Chile, Spain and Sweden, students in health and welfare fields are over 20 percentage points more likely to complete their programmes than those in STEM. New Zealand is a notable exception, where STEM completion rates exceed those in health and welfare (Table B5.3).

However, not all students complete their studies in the same field or even at the same level at which they began. In health and welfare, 74% of students complete a programme in the same field, 4% switch to a different field at the same level and 2% graduate from a different level of education. In contrast, students in STEM are more likely to switch: only 58% complete in the same field, while 9% shift to another field at the same level and 2% change levels. The pattern is similar in arts and humanities. This suggests that students who initially choose health and welfare are more likely to remain in that field, while those in STEM and arts fields are more prone to change (Figure B5.6 and Table B5.3).

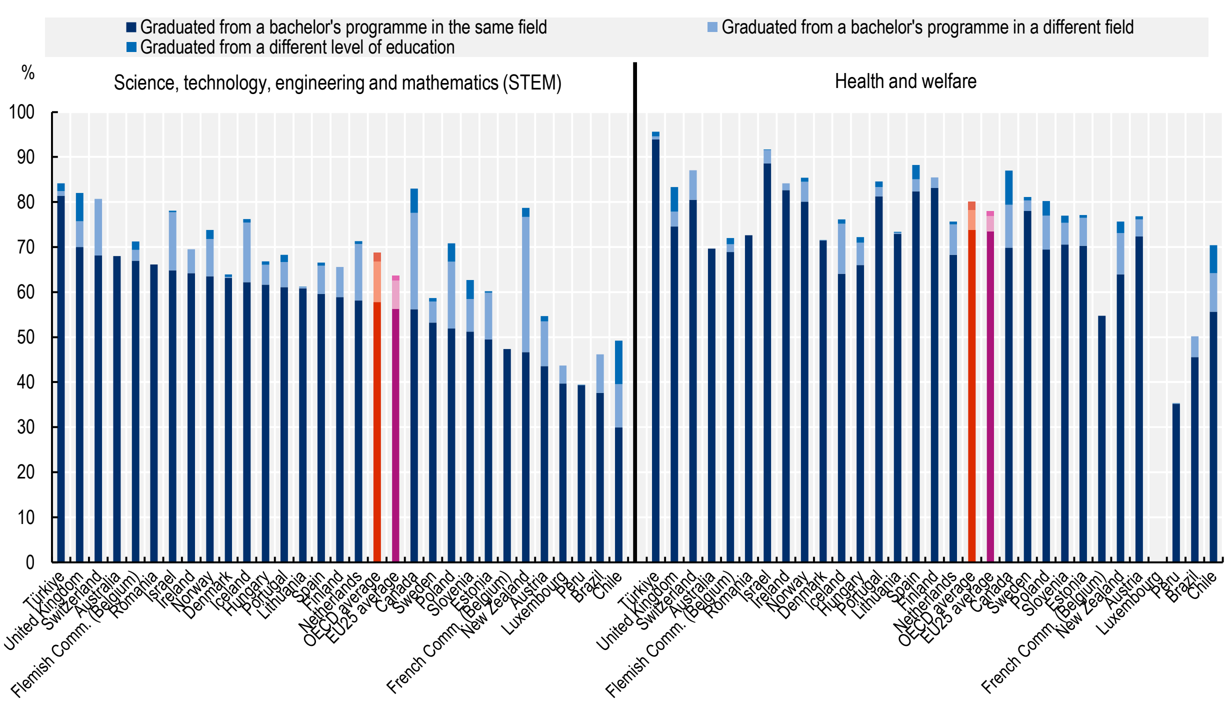
The degree of switching also varies across countries. In Canada, Chile, New Zealand and Poland, almost or more than 20% of students who entered STEM either changed fields or moved to a different level of education. Even in health and welfare, over 11% of students from these countries switched, exceeding the OECD average. In many of these countries, flexibility is built into the system through broad-based first-year programmes or credit structures, enabling students to explore different fields before committing (Figure B5.6).

Several factors may help explain these patterns. Labour-market dynamics can influence student decisions. In fields such as ICT or engineering, where demand is high, students may find job opportunities before completing a full qualification, reducing the incentive to graduate. Partial completion may be sufficient to enter the workforce, particularly in vocationally oriented fields.

Admission selectivity may also play a role. Fields with more rigorous entry requirements often attract students with stronger academic preparation and clearer motivation, which can lead to higher completion rates. In the Netherlands, for example, a study found that students admitted to medical school through competitive selection were more likely to complete their degrees on time than those admitted by lottery (Vos et al., 2019[31]).

Gender disparities in completion also emerge, particularly in STEM. Women account for just 30% of new entrants to STEM fields, yet in most contexts, a larger share of women change programmes or level before graduating compared to men (OECD, 2025[21]). Research suggests that this may be related to women in STEM programmes experiencing isolation, micro-aggressions and a male-dominated culture (Ong, Smith and Ko, 2017[32]). Women might also experience less of a sense of belonging then men in STEM-related fields, which has been associated with a decreased likelihood of persisting in their programme (Lewis et al., 2017[33]). To address these challenges, many OECD countries have implemented initiatives to reduce gender gaps. In Australia, the 2015 "Restoring the focus on STEM in schools" initiative sought to encourage more girls and disadvantaged students by expanding the Summer Schools for STEM programme and promoting STEM-related career pathways (OECD, 2017[34]). Higher education institutions can also play a role by adapting teaching methods, revising curricula and offering targeted mentoring to support women to complete their programmes (Do et al., 2021[35]).

Figure B5.6. Completion rates of new entrants to bachelor's programmes in STEM and health and welfare three years after the theoretical end of their programme, by graduation status (2023)

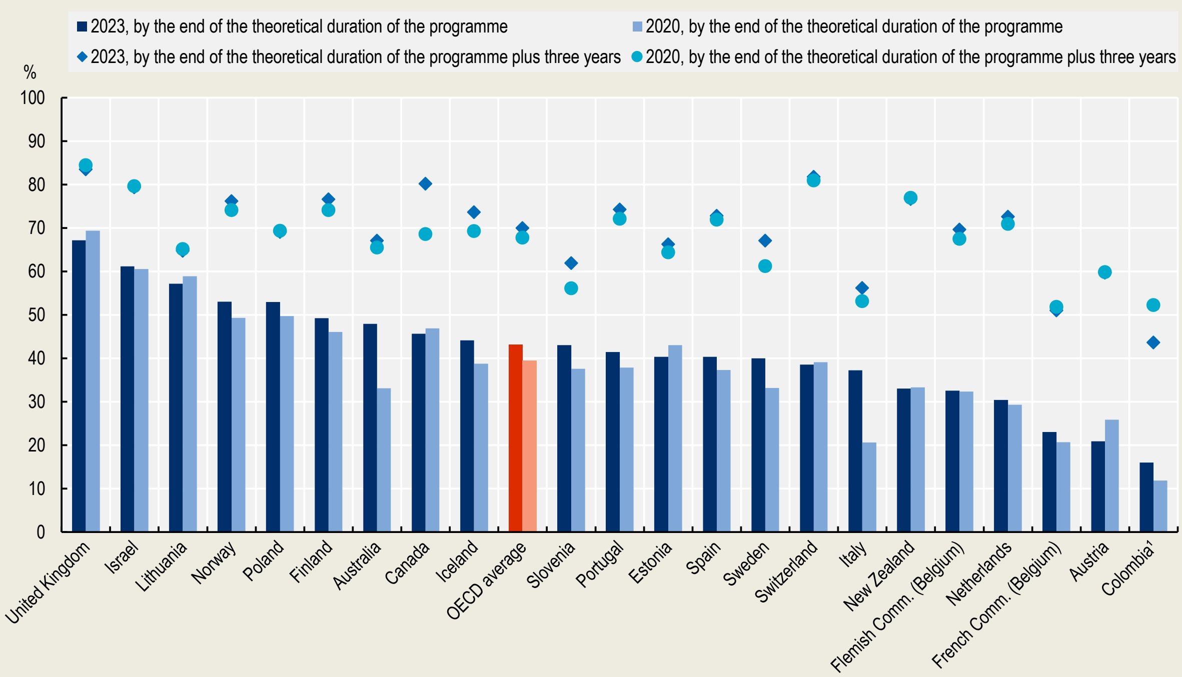


For data, see Table B5.3. For a link to download the data, see Tables and Notes section.

Box B5.2. Trends in completion rate 2023 and 2020 and the role of COVID-19

Most countries and economies have seen little change in bachelor's completion rates between 2020 and 2023. The exceptions are Australia and Italy, where the share of those completing by the end of the theoretical duration in 2023 was around 16 percentage points higher than in 2020. By the end of the theoretical duration plus three years, completion rates do not greatly differ except for Canada where the completion rate in 2023 was 12 percentage points higher than in 2020. Although completion patterns remained stable in many countries, others saw continued changes or improvements, possibly reflecting the longer-term effects of earlier disruptions and system-level responses (Figure B5.7).

Figure B5.7. Trends in completion rates of new entrants to bachelor's programmes, by timeframe (2020 and 2023)



For data, see Table B5.1 and Table B5.1 from Education at a Glance 2022 (OECD, 2022[36]).

Although COVID-19 first emerged in late 2019, its major impact on higher education began in March 2020, when lockdowns and campus closures were implemented worldwide. For students expected to graduate that year, the pandemic introduced sudden disruptions: delayed assessments, the cancellation of practical components and a rapid shift to online learning. These challenges, combined with mental health concerns and economic uncertainty, could have affected students' ability to graduate on time. However, despite these substantial disruptions, most countries did not report significant drops in tertiary completion rates for the affected cohorts.

One possible explanation is that, while some students did experience delays, many institutions and governments took swift action to minimise the academic consequences of the pandemic. Temporary adjustments to graduation criteria and academic requirements were widely implemented. These included flexible assessment formats, simplified grading and waivers for certain graduation components such as internships, research papers or foreign language certifications. For instance, Germany extended eligibility for student financial aid and allowed programme durations to be exceeded without penalty. Hungary temporarily waived its language requirement for graduation in 2020 (Government of Hungary, 2020[37]; Government of Hungary, 2020[38]) and Portugal introduced more flexible submission deadlines for theses. In Peru, emergency legislation allowed automatic graduation for students between 2020 and 2024, while in Latvia, institutions were granted discretion to adjust graduation criteria. These adaptive measures may have buffered the impact of the pandemic on formal completion rates. Moreover, some delays in graduation might not appear in the statistics if students met academic requirements in 2020 but received their official degree in 2021 due to administrative lags. Although the long-term impacts remain under investigation in many countries, these adaptive policy responses likely helped mitigate some of the disruption in completion trends.

Definitions

The **true cohort** method requires following an entry cohort through a specific timeframe, which in the case of this survey corresponds to the theoretical duration of the programme, the theoretical duration plus one and three years. Only countries with longitudinal surveys or student registers are able to provide such information.

Full-time students in this chapter refer to students who entered the given tertiary programme with full-time status. They may have switched status during their studies.

The **theoretical duration** of programmes is the regulatory or common-practice time it takes a full-time student to complete a level of education.

Methodology

This chapter covers only full-time students. On average across OECD countries, about 30% of tertiary students in 2023 were enrolled part time (OECD, 2025[21]). The theoretical duration of tertiary programmes varies across countries. Therefore, although the reference year for graduation is consistent (2023 unless otherwise specified), the entry year of student cohorts differs according to the length of the programme in each country.

For countries that submitted data using the true cohort method, it is possible to calculate two different completion rates (described below) which are computed for two different timeframes (theoretical duration N, one year N+1 and three years later, N+3):

- Completion rate of students who graduate at the same ISCED level which they entered: Number of graduates in a given calendar year and ISCED level divided by the number of entrants to that same ISCED level N/N+1/N+3 calendar years before
- Completion rate of students who graduate at any tertiary ISCED level: The sum of graduates from all tertiary ISCED levels in a given calendar year who entered a given ISCED level N/N+1/N+3 calendar years before.

Countries that submitted true cohort data either used first-time entrants to tertiary education (which considers only students who entered tertiary education for the first time) or new entrants to the tertiary level (which considers all first-time entrants to each tertiary level, regardless of whether they have pursued a different tertiary level before). Please see *Education at a Glance 2025 Sources Methodologies and Technical Notes* for the list of countries using each methodology (https://doi.org/10.1787/fcfaf2d1-en).

If countries offer programmes of different theoretical durations within the same ISCED level, the completion rate of each programme is weighted by the number of new entrants to each programme.

Please see the *OECD Handbook for Internationally Comparative Education Statistics 2018* (OECD, 2018[39]) for more information and *Education at a Glance 2025 Sources Methodologies and Technical Notes* for country-specific notes (https://doi.org/10.1787/fcfaf2d1-en).

Source

Data on completion rates refer to the academic year 2022/23 and were collected through a special survey undertaken in 2024. Data for some countries may have a different reference year, please refer *to Education at a Glance 2025 Sources Methodologies and Technical Notes* for country-specific notes (https://doi.org/10.1787/fcfaf2d1-en).

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Tables and Notes

Chapter B5 Tables

Table B5.1	Completion rates of new entrants into tertiary education, by level of education and timeframe (2023)
Table B5.2	Completion rates of new entrants into bachelor's programmes, by type of institution, timeframe and gender (2023)
Table B5.3	Completion rates of new entrants into bachelor's programmes by the end of the theoretical duration of their programme plus three years, by selected fields of study and gender (2023)
WEB Table B5.4	*Status of new entrants into bachelor's programmes, by timeframe (2023)*

StatLink https://stat.link/5mczv7

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table B5.1. Completion rates of new entrants into tertiary education, by level of education and timeframe (2023)

Note: The students included in this survey are those who were new entrants to a tertiary level of education and who were full-time students at the time they entered the programme. The year of reference (2023) corresponds to a period three years after the theoretical end of the programmes these students entered, 2021 to one year after the theoretical end and 2020 to the theoretical end. The year of entry (and consequently the year of reference for the drop-out rate) varies among countries, as it depends on the duration of the programme.

1. Year of reference differs from 2023: 2022 for Colombia.

Table B5.2. Completion rates of new entrants into bachelor's programmes, by type of institution, timeframe and gender (2023)

Note: The students included in this survey are those who were new entrants to a tertiary level of education and who were full-time students at the time they entered the programme. The year of reference (2023) corresponds to a period three years after the theoretical end of the programmes these students entered, 2021 to one year after the theoretical end and 2020 to the theoretical end.

1. Year of reference differs from 2023: 2022 for Colombia.

Table B5.3. Completion rates of new entrants into bachelor's programmes by the end of the theoretical duration of their programme plus three years, by selected fields of study and gender (2023)

Note: The students included in this survey are those who were new entrants to a tertiary level of education and who were full-time students at the time they entered the programme. The year of reference (2023) corresponds to a period three years after the theoretical end of the programmes these students entered, 2021 to one year after the theoretical end and 2020 to the theoretical end.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table B5.1. Completion rates of new entrants into tertiary education, by level of education and timeframe (2023)

	Students who entered a bachelor's (or equivalent) programme					Students who entered a short-cycle tertiary programme					Students who entered a master's long first degree programme				
			Completed any tertiary level					Completed any tertiary level					Completed any tertiary level		
	Theoretical duration of programmes (in years)	Dropped out after the first year	By the end of the theoretical duration of the programme	By the end of the theoretical duration of the programme plus one year	By the end of the theoretical duration of the programme plus three years	Theoretical duration of programmes (in years)	Dropped out after the first year	By the end of the theoretical duration of the programme	By the end of the theoretical duration of the programme plus one year	By the end of the theoretical duration of the programme plus three years	Theoretical duration of programmes (in years)	Dropped out after the first year	By the end of the theoretical duration of the programme	By the end of the theoretical duration of the programme plus one year	By the end of the theoretical duration of the programme plus three years
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Australia	3 - 5	15	48	58	67	m	m	m	m	m	a	a	a	a	a
Austria	3	13	21	42	60	2	8	70	82	84	6	10	35	50	61
Canada	4	13	46	69	80	2	30	32	51	62	m	m	m	m	m
Chile	4 - 5	14	13	38	60	2 - 3	24	25	41	52	6 - 7	3	8	52	82
Colombia[1]	5	22	16	32	44	2 - 3	21	29	38	43	a	a	a	a	a
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	3 - 4	16	53	67	70	2	19	62	69	71	a	a	a	a	a
Estonia	3 - 4	13	40	57	66	a	a	a	a	a	5 - 6	6	50	63	75
Finland	4	5	49	61	77	a	a	a	a	a	a	a	a	a	a
France	3	m	34	46	m	2	m	71	76	m	m	m	m	m	m
Germany	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	m	m	m	m	m	a	a	a	a	a	a	a	a	a	a
Hungary	3 - 4	5	50	65	72	2	11	41	56	61	5 - 6	2	39	65	77
Iceland	3 - 4	18	44	62	74	m	m	m	m	m	m	m	m	m	m
Ireland	m	12	68	74	77	m	22	62	65	65	m	m	a	a	a
Israel	3 - 4	8	61	75	79	1 - 3	12	22	45	57	a	a	a	a	a
Italy	3	13	37	51	56	m	m	m	m	m	5 - 6	m	m	m	m
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	3 - 4	9	57	64	65	1.5 - 2	m	m	m	m	5 - 6	2	67	72	73
Luxembourg	2 - 4	31	38	55	62	2	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	a	a	a	a	a
Netherlands	3 - 4	11	30	55	73	2	m	m	m	m	a	a	a	a	a
New Zealand	3	10	33	59	77	2	46	68	73	81	a	a	a	a	a
Norway	3 - 4	11	53	68	76	2	19	58	64	68	5 - 6	4	43	73	84
Poland	3 - 4	19	53	62	69	m	m	m	m	m	5	14	49	63	72
Portugal	3	8	41	65	74	2	19	49	57	62	5	4	34	63	78
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia	3 - 4	19	43	54	62	2	27	23	32	40	5 - 6	13	54	68	80
Spain	4	8	40	59	73	2	12	53	73	77	5 - 6	3	56	74	85
Sweden	3	10	40	54	67	2	18	66	70	71	4 - 5	7	43	57	73
Switzerland	3	8	39	66	82	a	a	a	a	a	m	m	m	m	m
Türkiye	4	1	64	78	86	2	1	56	68	75	5 - 6	0	76	90	96
United Kingdom	3 - 4	m	67	80	84	1 - 2	m	41	67	72	m	m	m	m	m
United States	m	m	m	m	m	m	m	m	m	m	a	a	a	a	a
Other economies															
Flemish Comm. (Belgium)	3 - 4	12	33	54	70	m	m	m	m	m	a	a	a	a	a
French Comm. (Belgium)	3 - 4	21	23	39	51	a	a	a	a	a	a	a	a	a	a
OECD average		13	43	59	70		19	49	60	65		6	46	66	78
Partner and/or accession countries															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	4 - 6	25	38	43	49	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	a	a	a	a	a	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	3 - 5	21	10	25	40	2 - 3	34	0	7	19	6 - 7	11	22	42	55
Romania	3	21	62	65	66	a	a	a	a	a	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average		13	44	58	68		17	55	64	66		7	47	64	75
Country average		m	m	m	m		m	m	m	m		m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B5.2. Completion rates of new entrants into bachelor's programmes, by type of institution, timeframe and gender (2023)

	All institutions						Public institutions						Private institutions					
	By the end of the theoretical duration of the programme			By the end of the theoretical duration of the programme plus three years			By the end of the theoretical duration of the programme			By the end of the theoretical duration of the programme plus three years			By the end of the theoretical duration of the programme			By the end of the theoretical duration of the programme plus three years		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Australia	44	51	48	63	70	67	44	51	48	64	71	68	45	46	46	54	57	56
Austria	20	21	21	55	64	60	7	8	7	48	57	53	55	61	58	74	84	79
Canada	38	51	46	76	83	80	38	51	46	76	83	80	a	a	a	a	a	a
Chile	11	15	13	52	68	60	5	6	6	55	71	64	12	17	15	51	67	60
Colombia[1]	13	19	16	37	49	44	7	10	9	38	38	38	16	23	20	40	52	47
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	52	54	53	67	72	70	52	54	53	66	72	70	26	28	27	82	61	71
Estonia	29	49	40	56	74	66	30	50	42	57	75	67	16	25	21	43	60	52
Finland	37	59	49	67	84	77	28	41	35	73	87	81	41	69	57	64	83	75
France	27	39	34	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Germany	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	39	59	50	64	79	72	41	54	47	69	79	74	38	61	50	62	79	71
Iceland	42	46	44	70	76	74	38	43	41	67	75	72	49	53	51	76	81	78
Ireland	61	74	68	70	83	77	m	m	m	m	m	m	m	m	m	m	m	m
Israel	56	65	61	75	82	79	44	59	56	60	72	70	57	66	62	76	85	81
Italy	32	41	37	51	61	56	m	m	m	m	m	m	m	m	m	m	m	m
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	48	64	57	56	72	65	50	65	58	58	72	66	38	59	51	43	64	56
Luxembourg	28	47	38	56	68	62	28	47	38	56	68	62	a	a	a	a	a	a
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	23	37	30	65	80	73	24	37	31	81	92	87	22	38	30	60	76	69
New Zealand	27	37	33	72	80	77	26	37	32	72	80	77	51	54	53	70	80	77
Norway	47	57	53	70	81	76	49	58	54	72	83	78	41	55	49	62	76	70
Poland	40	60	53	57	76	69	38	55	48	60	76	69	39	56	49	60	78	71
Portugal	35	46	41	66	81	74	34	46	41	66	81	75	38	47	43	66	79	73
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia	37	48	43	54	69	62	37	50	44	55	70	63	19	34	29	28	54	45
Spain	30	49	40	65	80	73	28	48	39	64	79	72	45	61	54	73	83	79
Sweden	36	43	40	57	74	67	35	41	39	56	73	66	44	58	52	66	82	75
Switzerland	35	41	39	79	84	82	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	54	73	64	80	91	86	54	73	64	80	91	86	54	74	64	79	92	86
United Kingdom	65	69	67	81	86	84	a	a	a	a	a	a	65	69	67	81	86	84
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Other economies																		
Flemish Comm. (Belgium)	26	38	33	63	75	70	24	35	30	63	75	69	28	39	34	63	75	70
French Comm. (Belgium)	16	29	23	43	58	51	14	25	20	38	53	46	18	32	26	47	63	56
OECD average	37	48	43	63	75	70	33	44	39	63	74	69	38	50	44	62	74	69
Partner and/or accession countries																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	33	42	38	43	53	49	28	38	33	46	59	53	34	42	39	43	51	48
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	8	11	10	36	44	40	9	14	12	37	45	41	8	10	9	35	43	39
Romania	53	67	62	57	70	66	54	68	63	59	72	67	49	56	53	52	58	55
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	36	50	44	60	74	68	34	46	41	61	74	69	35	49	43	59	72	67
Country average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table B5.3. Completion rates of new entrants into bachelor's programmes by the end of the theoretical duration of their programme plus three years, by selected fields of study and gender (2023)

	Arts, humanities, social sciences, journalism and information						Health and welfare						Science, technology, engineering and mathematics (STEM)					
				Of which						Of which						Of which		
	Men	Women	Total	Graduated from a bachelor's programme in the same field	Graduated from a bachelor's programme in a different field	Graduated from a different level of education	Men	Women	Total	Graduated from a bachelor's programme in the same field	Graduated from a bachelor's programme in a different field	Graduated from a different level of education	Men	Women	Total	Graduated from a bachelor's programme in the same field	Graduated from a bachelor's programme in a different field	Graduated from a different level of education
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Australia	60	68	65	65[d]	x(4)	a	64	72	70	70[d]	x(10)	a	63	76	68	68[d]	x(16)	a
Austria	54	59	57	31	23	3	70	79	77	72	4	1	55	55	55	44	10	1
Canada	69	80	76	51	18	7	81	88	87	70	10	8	80	86	83	56	21	5
Chile	53	67	61	41	15	5	61	73	70	56	9	6	48	56	49	30	10	10
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	66	73	70	70	0	0	66	73	72	71	0	0	64	64	64	63	0	1
Estonia	57	70	66	59	7	0	64	79	77	70	6	1	54	73	60	50	10	0
Finland	70	83	79	72	7	a	76	87	85	83	2	a	62	76	66	59	7	a
France	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Germany	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	66	79	75	70	4	1	59	74	72	66	5	1	64	77	67	62	4	1
Iceland	66	74	71	62	8	1	79	76	76	64	11	1	75	78	76	62	13	1
Ireland	73	81	78	66	12	0	79	85	84	83	2	0	66	79	69	64	5	0
Israel	76	84	81	67	14	0	88	93	92	89	3	0	76	82	78	65	13	0
Italy	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	56	70	66	65	0	0	61	75	73	73	0	0	58	71	61	61	0	0
Luxembourg	56	68	63	59	4	0	a	a	a	a	a	a	44	44	44	40	4	0
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	68	83	77	63	14	0	63	79	76	68	7	1	67	84	71	58	13	1
New Zealand	69	78	75	51	21	3	66	78	76	64	9	3	74	85	79	47	30	2
Norway	63	76	71	58	12	2	76	87	85	80	4	1	73	77	74	64	8	2
Poland	54	71	65	49	11	5	61	84	80	69	7	3	65	81	71	52	15	4
Portugal	67	80	75	71	4	1	75	87	85	81	2	1	63	80	68	61	6	2
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia	54	68	63	50	10	3	60	80	77	71	5	2	59	72	63	51	7	4
Spain	64	76	72	67	5	0	83	90	88	82	3	3	62	75	67	60	6	1
Sweden	52	63	59	45	12	2	69	84	81	78	2	1	54	70	59	53	5	1
Switzerland	74	83	80	68	12	0	84	88	87	81	7	0	80	82	81	68	13	0
Türkiye	77	89	84	80	1	3	91	97	96	94	1	1	81	90	84	81	1	2
United Kingdom	83	87	85	76	4	5	81	84	83	75	3	5	80	87	82	70	6	6
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Other economies																		
Flemish Comm. (Belgium)	56	74	68	65	2	1	64	75	72	69	2	1	68	85	71	67	2	2
French Comm. (Belgium)	45	57	51	51	x(4)	x(4)	42	61	55	55	x(10)	x(10)	46	61	47	47	x(16)	x(16)
OECD average	64	75	71	61	9	2	71	82	80	74	4	2	65	75	68	58	9	2
Partner and/or accession countries																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	49	60	55	45	10	0	44	53	50	46	5	0	44	53	46	38	9	0
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	39	50	46	45	0	0	32	36	35	35	0	0	36	47	39	39	0	0
Romania	52	66	62	62	m	0	68	75	73	73	m	0	61	72	66	66	m	0
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	60	72	68	60	7	1	67	80	78	74	3	1	60	72	63	56	6	1
Country average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Part C. Financial resources invested in education

Chapter C1. Key system-level indicators of education finance

Highlights

- For students in primary, secondary or post-secondary non-tertiary education, governments in OECD countries spend on average USD 12 438 per student, ranging from below USD 4 000 in Mexico and Türkiye to around USD 21 000 or more in Korea, Luxembourg and Switzerland. At tertiary level the figures also vary widely, with governments spending 15 102 on average per student (including on R&D), over USD 25 000 per student in Luxembourg, Norway and Switzerland, and less than USD 5 000 per student in Chile and Mexico.
- Expenditure per student is influenced by national income levels, but some countries spend more than others relative to their gross domestic product (GDP) per capita. Countries spending below the OECD average in absolute terms may be spending above the average relative to their income. For example, in Chile, Portugal and the Slovak Republic total expenditure per student (primary to tertiary levels) is below the OECD average in absolute terms but amounts to 26% of GDP per capita per student in Chile, 29% in Portugal and 28% in the Slovak Republic, above the OECD average of 25%.
- Expenditure on education (primary to tertiary levels) has increased on average between 2015 and 2022 both in absolute terms and per student. At the same time, it has lost ground within public budgets. Government expenditure on education as a share of total government expenditure on all services fell by 6.9% on average across OECD countries, from 10.9% in 2015 to 10.1% in 2022.

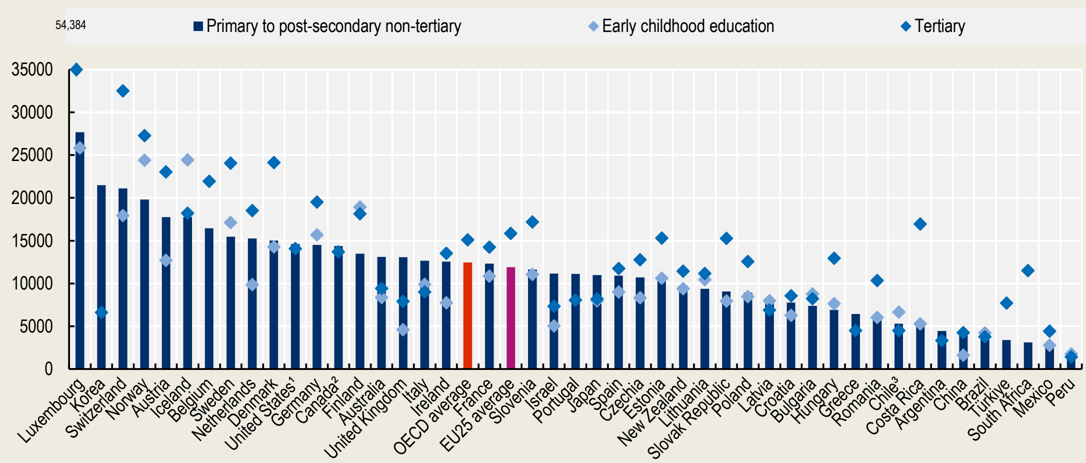
Context

Governments invest in education for various reasons, such as promoting equality of opportunity and fostering economic growth and prosperity. As governments face competing pressures on tight budgets, private sources (such as students and their families or companies) often complement public sources, especially at tertiary levels. Tertiary education includes research and development, to varying extent across different countries. Policy makers make choices about how much funding to allocate to education and how to distribute those resources across different levels of education, types of institution and geographical areas. These choices are made in the context of constantly changing policy environments – including shifts in the size and demographics of the student body and teacher shortages.

This chapter provides a broad picture of key education finance indicators, setting out how OECD countries are responding to the challenge of financing education systems. It distinguishes between the levels that mostly cover schooling (i.e. primary to post-secondary non-tertiary education) and tertiary education. Subsequent chapters focus on specific levels of education and offer more fine-grained insights.

Figure C1.1. Government expenditure per full-time equivalent student, by level of education (2022)

In equivalent USD converted using PPPs, expenditure on educational institutions



Note: Expenditure at tertiary level includes R&D. Expenditure per student in early childhood education is based on headcounts rather than full-time equivalent students.
1. Year of reference differs from 2022.
2. Primary includes pre-primary education.
3. Includes payments by households outside educational institutions.
For data, see Table C1.1 and Table C2.1. For a link to download the data, see Tables and Notes section.

Other findings

- Governments are the predominant source of funding at primary, secondary and post-secondary non-tertiary level. On average, OECD governments spend USD 12 438 on educational institutions per full-time equivalent student while only USD 1 088 comes from private (and to a lesser extent non-domestic) sources. At tertiary level, private sources play a much more important role: government expenditure (including R&D) averages USD 15 102 per full-time equivalent student and private expenditure averages USD 6 343.
- Total expenditure on primary and secondary education, which largely covers initial schooling and compulsory education, amounts to 3.3% of GDP on average across OECD countries. Post-secondary non-tertiary education tends to be a small part of education systems, with expenditure equivalent to only 0.1% of GDP on average, while 1.4% of GDP is dedicated to tertiary education.

Analysis

Government spending per student

Figure C1.1 shows direct government expenditure per student grouped by levels of education. This measure captures public investment in education and is the most comparable metric. Data on government expenditure tend to be readily available across countries, while data on private expenditure (mostly by families, but also foundations or companies) are often harder to collect.

Governments in OECD countries spend USD 12 438 per student in primary, secondary or post-secondary non-tertiary education on average, ranging from below USD 4 000 in Mexico and Türkiye to over USD 21 000 in Korea, Luxembourg and Switzerland. At tertiary level, government expenditure per student ranges from around USD 25 000 or above in Luxembourg, Switzerland, Norway, Sweden and Denmark to less than USD 5 000 per student in Chile and Mexico. These figures include research and development (R&D), which in some countries accounts for a large share of government expenditure at tertiary level – in Israel, Switzerland and the United Kingdom, government expenditure including R&D is more than double government expenditure excluding R&D (Table C1.1).

Different broad measures of investment in education

Figure C1.2 shows three different measures of countries' total investment – government plus private expenditure – in education from primary to tertiary levels. First, expenditure per student shows how much is spent per full-time equivalent student (this distinction is particularly important at tertiary level, where part-time enrolment may be common). The amounts are given in USD, adjusted to account for differences in purchasing power across countries (purchasing power parity; PPP). By this measure spending on education tends to be highest in the wealthiest countries and lowest in less wealthy economies; the highest spender is Luxembourg, followed by Norway and Austria, while the lowest is Peru, followed by Mexico and Türkiye.

The other two measures provide a picture of education expenditure relative to a country's income level. Expenditure per student as a percentage of GDP per capita indicates investment in education relative to the average economic output per person, which in turn reflects the country's prosperity. Expenditure on educational institutions as a share of GDP illustrates investment in education relative to the size of a country's economy.

Some countries have high levels of spending across all measures (e.g. Austria, Norway and the United States). Luxembourg has high expenditure per student, but its high GDP and GDP per capita, mean its spending relative to those measures is lower. In contrast, some countries which spend below the OECD average of USD 15 023 per student record above average expenditure relative to income. For example, Chile spends just USD 8 068 per student, but this amounts to 26% of GDP per capita, above the OECD average of 25%, while the Slovak Republic spends USD 11 259 per student (28% of GDP per capita) and Portugal spends USD 12 956 (29%) (Figure C1.2).

Figure C1.2. Expenditure on educational institutions, primary to tertiary education (2022)

	Expenditure per student (in USD PPP)	Expenditure per student as a percentage of GDP per capita (in per cent)	Expenditure on educational institutions as a percentage of GDP (in per cent)
Luxembourg	31 439	21.8	3.3
Norway	22 558	29.4	6.2
Austria	20 942	29.6	4.7
United States[1]	20 387	30.1	5.8
Korea	19 805	36.0	5.6
Denmark	19 229	24.9	5.3
Netherlands	19 186	24.9	5.0
United Kingdom	19 072	32.0	6.1
Belgium	19 024	27.9	5.6
Canada[2]	18 733	29.3	5.5
Iceland	18 707	24.6	5.6
Germany	17 960	26.6	4.4
Sweden	17 804	26.9	5.3
Australia	17 529	25.3	5.4
Ireland	15 915	11.7	2.8
France	15 427	27.5	5.4
OECD average	15 023	25.3	4.7
Finland	15 000	24.5	5.2
Slovenia	14 454	28.3	4.6
EU25 average	14 285	24.3	4.2
Japan	14 130	29.4	3.9
Italy	13 750	24.4	3.9
Spain	13 385	26.5	4.5
Portugal	12 956	29.2	4.8
Israel	12 877	24.0	6.1
Czechia	12 844	25.0	4.2
New Zealand	12 389	23.7	5.1
Estonia	12 362	25.5	4.5
Poland	11 488	25.6	4.1
Lithuania	11 313	22.4	3.7
Slovak Republic	11 259	27.5	4.2
Hungary	10 097	22.9	3.4
Latvia	9 204	23.1	3.8
Croatia	9 033	21.9	3.4
Bulgaria	8 703	24.3	3.3
Chile[3]	8 068	26.5	5.9
Romania	7 221	16.3	2.5
Greece	7 137	18.6	3.9
Türkiye	5 305	13.6	3.4
China	5 161	22.4	4.1
South Africa	4 395	28.4	6.9
Mexico	4 066	17.4	4.3
Peru	2 612	15.6	4.2

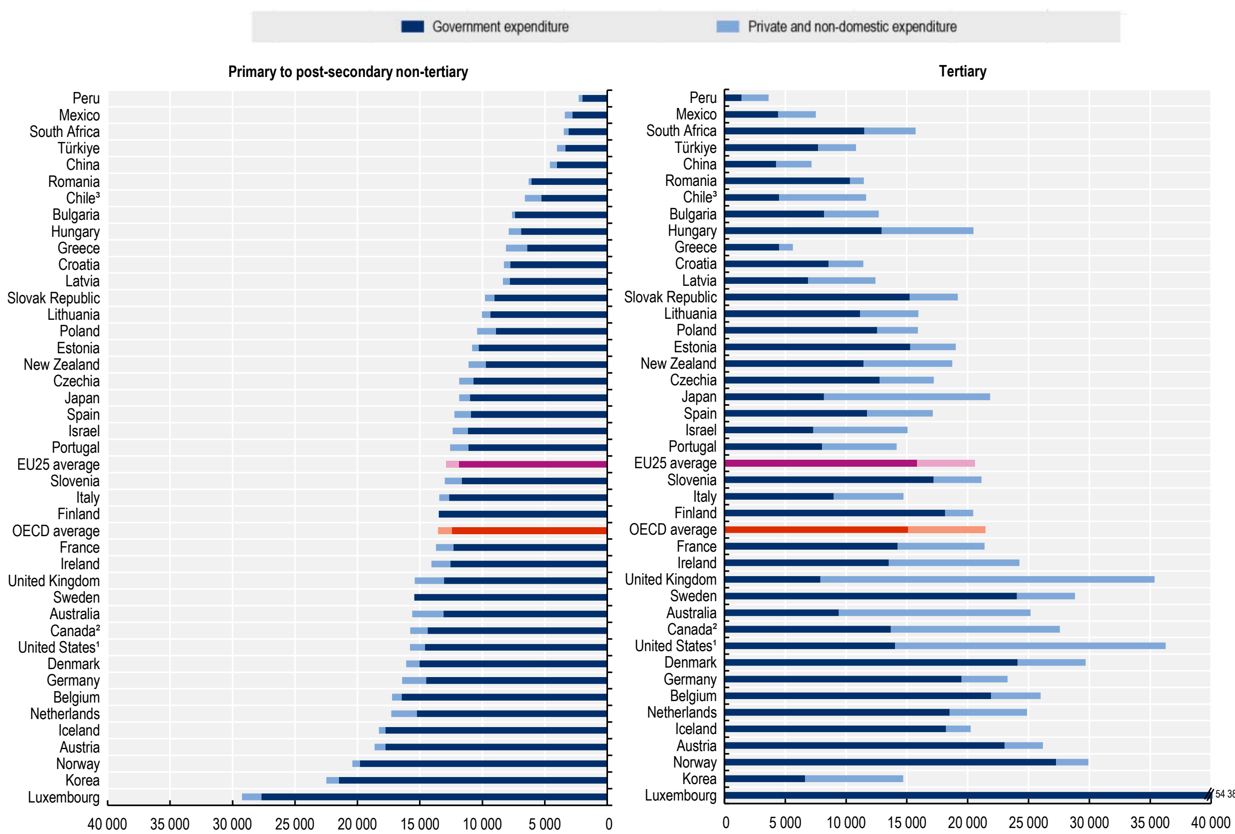
Note: A colour gradient is applied per column, with dark blue indicating relatively higher values and light yellow relatively lower ones. Expenditure at tertiary level includes R&D.
1. Year of reference differs from 2022.
2. Primary includes pre-primary education.
3. Includes payments of households outside educational institutions.
For data, see Table C1.1, Table C1.2 and C1.7. For a link to download the data, see Tables and Notes section.

Private sources complementing government funding

Private sources (and non-domestic sources) complement government expenditure to varying extents across countries (Figure C1.3). In primary, secondary and post-secondary non-tertiary education, government sources are the predominant source of funding. On average across OECD countries, USD 12 438 per full-time equivalent student comes from governments, while only USD 1 088 comes from private and non-domestic sources. This reflects the fact that education at these levels is mostly initial education, and largely compulsory (pre-primary education is compulsory in some countries but is not captured here, see Chapter B1).

Figure C1.3. Expenditure per full-time equivalent student in primary to tertiary education, by source and level of education (2022)

In equivalent USD converted using PPPs, expenditure on educational institutions



Note: Expenditure at tertiary level includes R&D.
1. Year of reference differs from 2022.
2. Primary includes pre-primary education.
3. Includes payments by households outside educational institutions.
For data, see Table C1.1. For a link to download the data, see Tables and Notes section.

Private sources play a much more important role in funding tertiary educational institutions than at lower levels of education. This reflects the benefits that individuals gain from pursuing tertiary studies in the form of better employment outcomes, underpinning the rationale behind governments and students sharing the costs in many countries. For example, expenditure from private greatly exceeds that from government sources in the United Kingdom and the United States, driven partly by relatively high tuition fees in these countries (see Chapter C5 for data on tuition fees and public financial support). Meanwhile, the smaller role of private sources in Nordic countries reflects a different approach: tertiary education is primarily publicly funded and is available tuition-free to students.

It is worth noting that the spending per student from private sources (as well as non-domestic sources) shown in Figure C1.3 does not solely reflect the contribution of students and their families. The figure shows expenditure after public-private transfers, so it counts spending by students who have received a government-funded grant or loan as private expenditure. Private sources also include expenditure from companies, foundations and other private entities as well as from students in their families (see Box C5.2 in Chapter C5 for country examples). Table C1.5 (available on line) provides further details.

Changes in expenditure on education

Changing demographics and enrolment patterns shape expenditure on education as a whole and per student. Ageing societies mean some countries have fewer children, while continuously increasing interest in tertiary education leads to an increasing share of young people pursuing tertiary studies (the number of non-domestic students also shapes enrolment in tertiary programmes, while lower-level programmes tend to serve mostly domestic students). Figure C1.4 shows the changes at primary to post-secondary non-tertiary level between 2015 and 2022 in three measures: total spending on educational institutions per student and overall, and the number of full-time equivalent students. The different measures of changes in expenditure take into account both inflation and differences in living standards across countries.

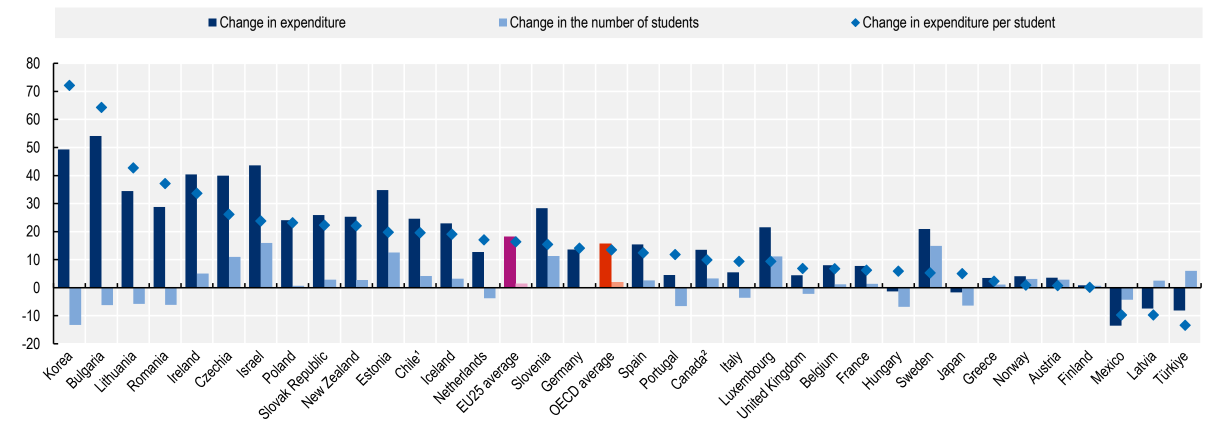
Taken across all levels from primary to tertiary, on average across OECD countries, the number of students increased slightly, by 2.5% between 2015 and 2022. However, overall expenditure on these levels increased by 14.7% on average over the same period, leading to a 11.9% increase on average in expenditure per student. The pattern of change differs between primary to post-secondary non-tertiary education on the one hand and tertiary education on the other hand. Overall, the number of students at the lower level has increased slightly (increasing by 2.1% on average across OECD countries), while there has been a stronger increase in enrolment at tertiary level (by 5.0%). At both levels, expenditure per student and overall expenditure have increased on average and in most countries (Table C1.3).

Thirteen OECD and partner countries have seen a fall in the number of primary to tertiary students between 2015 and 2022 and in nearly all of these, expenditure per student has increased over the same period. Most of these countries saw an increase in expenditure combined with falling enrolment, leading to a considerable increase in expenditure per student, as for example in Chile, Ireland and Korea (Table C1.3).

Government expenditure on primary to tertiary education in absolute terms, also increased over the same period by 13.1% on average across OECD countries. This average conceals wide variations across countries, with large increases in some (over 26% in ten countries) and substantial decreases in a few other countries (a decrease of over 15% in Latvia and Mexico). Despite the overall increase, education spending appears to be losing ground relative to other priorities in public budgets. As a share of total government expenditure on all services, expenditure on education fell by 6.9% on average across OECD countries, from 11% in 2015 to 10% in 2022. The average is driven by a relatively large fall in a few countries (over 30% in Costa Rica and Latvia), but there were another 11 countries which saw a decrease of at least 10% on this measure (Table C1.3). Figure C1.6 shows the breakdown of government expenditure on different functions of government.

Figure C1.4. Change in the number of students, expenditure on primary to post-secondary non-tertiary educational institutions and expenditure per student (2015 to 2022)

In per cent, based on full-time equivalent students, constant prices



1. Includes payments by households outside educational institutions.
2. Primary includes pre-primary education.
For data, see Table C1.3. For a link to download the data, see Tables and Notes section.

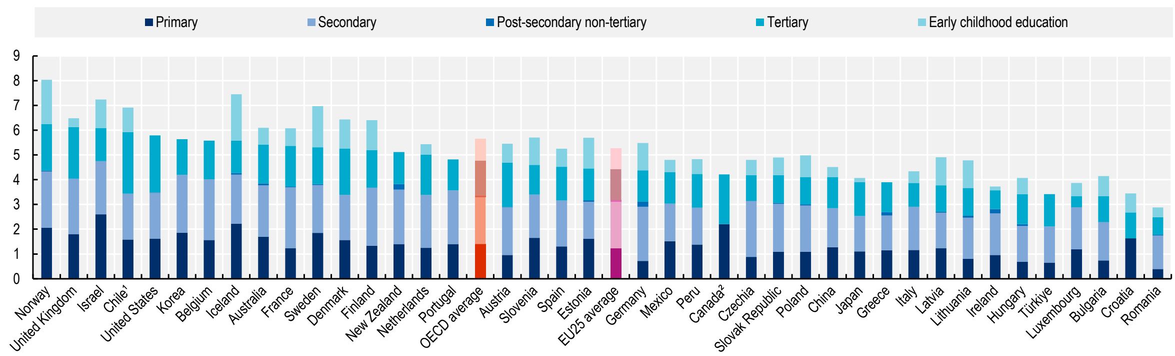
Provisional data on education expenditure in 2023 are available for a small number of countries. After accounting for inflation, expenditure per student at primary to tertiary levels decreased between 2022 and 2023 in Germany, Slovenia and Spain. In Lithuania and New Zealand, however, expenditure per student increased over the same period (Table C1.8, available on line).

Distribution of expenditure across levels of education

Figure C1.5 shows total expenditure on educational institutions relative to GDP by level of education. On average OECD countries spend 4.7% of their GDP on education (primary to tertiary level). The mix of funding dedicated to different levels reflects various factors: how the education system is organised (e.g. if the primary level includes more years of education, spending will be higher), the number of students at each level of education and how much is spent per student at each level of education (generally spending per student increases at higher levels of education). Primary and secondary education account for 3.3% of GDP on average. Post-secondary non-tertiary education, which tends to be a small part of most education systems and not available at all in some OECD countries, accounts for only 0.1% of GDP on average. Resources dedicated to tertiary education average 1.4% of GDP but vary widely across countries. Expenditure on early childhood education and care (ECEC) is shown as an additional category on top of expenditure on primary to tertiary, because the availability of data at this level is sometimes quite limited, even though investment in ECEC is widely seen as key for building strong foundations for further learning. One reason for limited data availability is that in some countries ECEC does not fall under the responsibility of the same authorities as primary to tertiary education.

Figure C1.5. Expenditure on educational institutions as a percentage of GDP, by level of education (2022)

In per cent



Note: Expenditure at tertiary level includes R&D.
1. Includes payments by households outside educational institutions.
2. Primary includes pre-primary education.
For data, see Table C1.2, C2.1, C3.1 and C4.4. For a link to download the data, see Tables and Notes section.

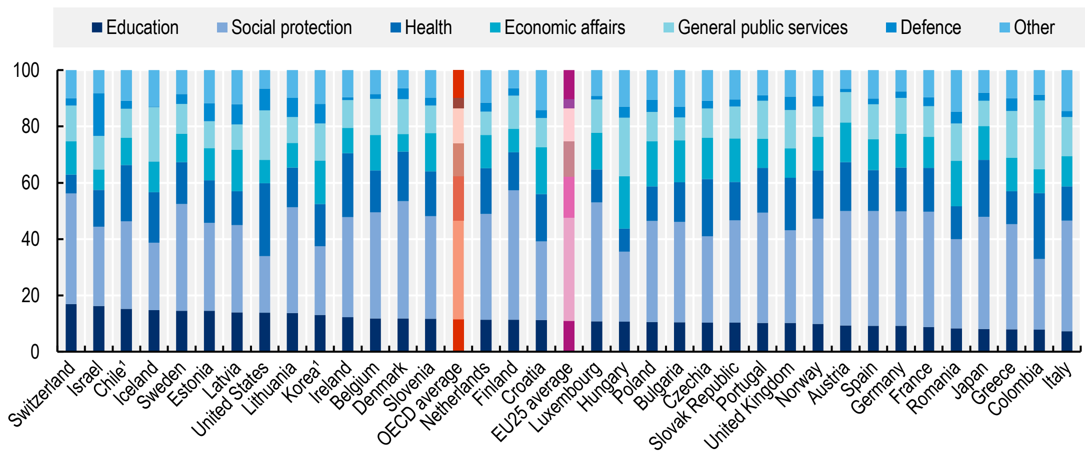
Education expenditure in the wider context of government spending

Figure C1.6 shows government education expenditure in the context of government spending on other functions (Eurostat, 2019[1]). On average OECD countries dedicate 11% of government expenditure to education. The data in this figure differ slightly from those in Table C1.3: expenditure on education here includes non-formal learning but excludes early childhood educational development (which is included in social protection and health instead). Education is one of the largest areas of expenditure after social protection and health, and on a par with economic affairs and general public services.

There is much variation across countries, ranging from Chile, Israel and Switzerland, which dedicate over 15% of government expenditure to education, to Colombia and Italy, which dedicate less than 8%. In almost all countries, social protection receives the largest share of government expenditure, accounting for over 40% in various European countries and for 35% of government expenditure on average. Health receives the second largest share (16% on average across OECD countries), with again much variation across countries: from less than 10% in Hungary and Switzerland, to 26% in the United States (Table C1.9, available on line).

Figure C1.6. Distribution of government expenditure by function (2023)

In per cent, data based on the Classification of the Functions of Government (COFOG)



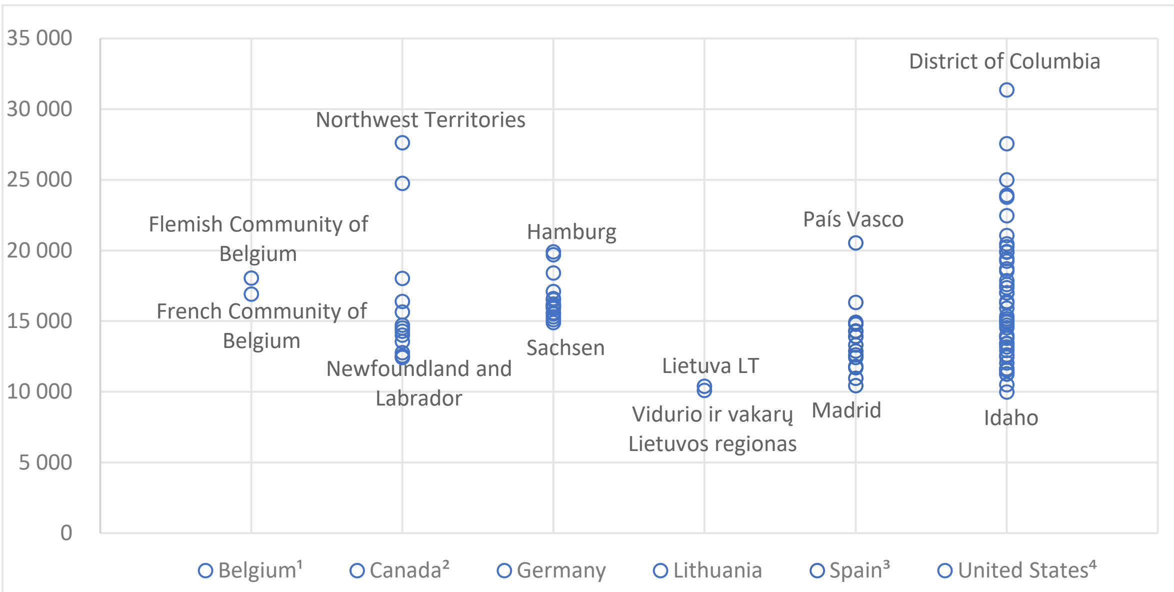
Note: The category "Other" includes Public order and safety, Environmental protection, Housing and community amenities, and Recreation, culture and religion. COFOG data are not fully comparable to UOE data used in other parts of this chapter due to differences in underlying definitions. Notably non-formal learning is excluded from UOE data, but included in COFOG data.
1. Year of reference differs from 2023. Refer to the source table for more details.
For data, see Table C1.9, available on line. For a link to download the data, see Tables and Notes section.

Subnational variations in expenditure per student

The various financial indicators presented in Part C focus on data that are aggregated at country level and do not capture potential regional disparities. However, it is important to recognise that country-level data may conceal substantial variation within countries. Figure C1.7 illustrates regional expenditure per student in primary and secondary education in six countries. These differences can arise due to a combination of factors. Subnational governments play an important role in financing education in some countries and geographical disparities in economic activity mean that different regions and municipalities may have different capacities to raise resources for education. This may be balanced by funding from central governments (e.g. a funding formula might allocate more resources to poorer areas). But there are many other potential factors at play; for example rural areas with smaller classes will have higher spending per student, all other things being equal. Data on regional expenditure per student may indicate potential sources of inequality within countries but also enable cross-country comparisons – a region that ranks highly within its own country may still lag behind internationally.

Figure C1.7. Regional variation in expenditure on educational institutions per full-time equivalent student (2022)

Primary and secondary education, in equivalent USD converted using PPPs



1. Includes post-secondary non-tertiary education.
2. Year of reference 2021. Education finance data for Canada are calendarised, but not for subnational data.
3. Data refer to public expenditure on non-university education per student in public institutions. Only public expenditure is reported, implying that private expenditure in public institutions is not covered.
4. Reference year 2021. Data refer to public institutions only. ISCED 02 is included in the ISCED 1-3 total for both spending and enrolment counts. Total expenditure includes current expenditure and capital outlays.
For a link to download the data, see Tables and Notes section.

Definitions

Expenditure on educational institutions refers to expenditure on educational goods and services within both teaching (e.g. schools, universities and colleges) and non-teaching institutions (ministries and local authorities). It excludes expenditure outside educational institutions, even if publicly subsidised (e.g. private tutoring outside educational institutions, the purchase of textbooks and other materials, and students' living expenses).

Direct government expenditure on educational institutions can take the form of purchases by a government agency of educational resources to be used by educational institutions, or funding provided by a government agency to educational institutions to make such purchases.

Direct private expenditure on educational institutions includes tuition fees and other private payments to educational institutions, whether or not supported by government subsidies. Private sources of expenditure include **households** (students and their families) and **other private entities**, such as businesses and non-profit organisations.

Government transfers to the private sector include two categories. Government transfers to households include transfers that translate into payments to educational institutions for educational services (e.g. scholarships or student loans for tuition). Government transfers to other private entities include, for example, subsidies to firms that host apprentices and interest subsidies to private financial institutions that provide student loans.

Initial government spending includes direct government expenditure on educational institutions and transfers to the private sector. It excludes transfers from non-domestic sources. **Initial private spending** includes tuition fees and other household payments to educational institutions, minus the portion of such payments offset by government subsidies. **Initial non-domestic spending** includes direct non-domestic expenditure on educational institutions (e.g. a research grant from a foreign corporation to a public university) and transfers from non-domestic sources to governments.

Final spending reflects actual disbursements to educational institutions after public-private transfers. **Final government spending** includes direct government purchases of educational resources and payments to educational institutions. **Final private spending** includes direct expenditure on educational institutions (e.g. tuition fees), whether partially covered by government subsidies or not. It also includes expenditure by private companies on the work-based element of combined school- and work-based programmes. **Final non-domestic spending** includes direct non-domestic payments to educational institutions such as research grants or other funds from non-domestic sources paid directly to educational institutions.

All domestic **government sources** of expenditure on education are classified under three levels: central, regional and local. **Intergovernmental transfers** are defined as net transfers from a higher to a lower level of government. **Initial funds** refer to the funds before transfers between levels of government, while **final funds** refer to the funds after transfers.

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

Methodology

The **framework that underpins the education finance indicators** contained in Part C is built around three dimensions (for details see Education at a Glance 2025 Sources, Methodologies and Technical Notes, (https://doi.org/10.1787/fcfaf2d1-en)

- **The location of service providers**. This dimension distinguishes between the spending that occurs in educational institutions and spending that takes place outside them. In this context, educational institutions include both teaching institutions (e.g. schools and universities) and non-teaching institutions (e.g. education ministries). Examples of spending outside educational institutions include books purchased outside institutions, fees for private tutoring and student living costs.
- **The type of goods and services**. This dimension allows spending on core educational purposes (e.g. expenditure on teachers, school buildings, books, administration of schools) to be differentiated from other education-related expenditures (e.g. research and development, ancillary services such as meals and housing).
- **The source of funds.** The framework distinguishes between three sources of funds. Government expenditure refers to spending by public authorities. Private expenditure refers to spending by households and other private entities (e.g. companies). International funds consist of funds from public multilateral organisations for development aid to education.

Expenditure and GDP values in national currencies are converted to equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP. The PPP conversion factor is used instead of the market exchange rate, because exchange rates are affected by various factors (e.g. interest rates, trade policies or expectations of economic growth) that do not necessarily reflect relative domestic purchasing power across countries. Subnational expenditure data are adjusted using national PPPs. If the reference periods for education expenditure and GDP differ, the expenditure data are adjusted to match the GDP reference period using relevant national inflation rates (see Annex 2 for further details).

Expenditure per full-time equivalent (FTE) student is calculated for primary to tertiary education, and only for programmes and educational institutions with both enrolment and expenditure data. This measure is affected by how countries report the number of FTE students, especially at tertiary level, where part-time study is more common. Some countries count all students as full time, while others calculate the number of FTE students based on students' intensity of participation – for example by using credits earned during a specific period towards the targeted qualification. All else being equal, countries that calculate FTE students based on part-time enrolment will report higher expenditure per FTE student than those that report all students as full time.

In keeping with the system used by many countries to record government expenditures and revenues, educational expenditure data are compiled on a cash accounting rather than an accrual accounting basis. Therefore expenditure (both capital and current) is recorded in the year in which the payments occurred. In particular:

- Capital acquisitions are counted fully in the year in which the expenditure occurs.
- Depreciation of capital assets is not recorded as expenditure, although expenditure on repairs and maintenance is recorded in the year it occurs. This can result in sharp fluctuations in expenditure from year to year owing to the start or completion of school building projects which, by their nature, are sporadic.
- Expenditure on student loans is recorded as the gross loan outlay in the year in which the loans are made, without subtracting repayments or interest payments from existing borrowers.

A notable exception to the cash accounting rules is the treatment of the retirement costs of educational personnel in situations where there are no (or only partial) ongoing employer contributions towards the future retirement benefits of the personnel. In these cases, countries are asked to impute these expenditures to arrive at a more internationally comparable cost of employing the personnel.

At tertiary level, many countries operate a loan payment/repayment system. While public loan payments are included in expenditure figures, loan repayments from private individuals are not. As a result, private contribution to education costs may be underestimated.

For more detailed information, please refer to the OECD Handbook for Internationally Comparative Education Statistics (OECD, 2018[2]). For country-specific notes, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes.*

Source

Data refer to the financial year 2022 (unless otherwise specified) and are based on the UNESCO, OECD and Eurostat (UOE) data collection on education statistics administered by the OECD in 2024 (for details see Education at a Glance 2025 Sources, Methodologies and Technical Notes, (https://doi.org/10.1787/fcfaf2d1-en)

Data for China, India, Indonesia and Saudi Arabia are from the UNESCO Institute of Statistics (UIS), while data for Argentina and South Africa are partly sourced from UIS.

References

Eurostat (2019), *Manual on Sources and Methods for the Compilation of COFOG Statistics: Classification of the Functions of Government*, Publications Office of the European Union, Luxembourg, https://doi.org/10.2785/498446. [1]

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264304444-en. [2]

Tables and Notes

Chapter C1 Tables

Table C1.1	Expenditure on educational institutions per student, by level of education (2022)
Table C1.2	Expenditure on educational institutions as a percentage of GDP, by level of education (2022)
Table C1.3	Change in expenditure on education, by level of education (2015 to 2022)
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WEB Table C1.9	*Distribution of government expenditure, by function (2023)*

StatLink https://stat.link/7uaizn

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table C1.1. Expenditure on educational institutions per student, by level of education (2022)

1. Upper secondary includes post-secondary non-tertiary education.
2. Primary education includes pre-primary education.
3. Total expenditure on educational institutions includes payments of households outside educational institutions.
4. Upper secondary and tertiary include post-secondary non-tertiary education.
5. Year of reference 2021.

Table C1.2. Expenditure on educational institutions as a percentage of GDP, by level of education (2022)

Note: Columns showing total government expenditure on education including expenditure outside educational institutions are available for consultation on line.

1. Upper secondary includes post-secondary non-tertiary education.
2. Primary education includes pre-primary education.
3. Total expenditure on educational institutions includes payments of households outside educational institutions.

4. Upper secondary and tertiary include post-secondary non-tertiary education.
5. Year of reference 2021.

Table C1.3. Change in expenditure on education, by level of education (2015 to 2022)

Note: Columns showing the data on expenditure and numbers of students for 2015 and 2022 are available for consultation on line.

1. Primary education includes pre-primary education.
2. Total expenditure on educational institutions includes payments of households outside educational institutions.
3. Upper secondary and tertiary include post-secondary non-tertiary education.

Table C1.4. Distribution of government funds devoted to education, by level of government and level of education (2022)

Note: Columns showing values for primary to tertiary education are available for consultation on line.

1. Primary education includes pre-primary education.
2. Total expenditure on educational institutions includes payments of households outside educational institutions.
3. Some transfers are included in central government expenditure, causing total shares to slightly exceed 100%.
4. Upper secondary and tertiary include post-secondary non-tertiary education.
5. Year of reference 2021.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table C1.1. Expenditure on educational institutions per student, by level of education (2022)

In equivalent USD converted using PPPs for GDP, direct expenditure within educational institutions

	Expenditure on educational institutions per student (in equivalent USD converted using PPPs for GDP)											
	Total (government, private and non-domestic expenditure)						Government expenditure					
	Primary, secondary and post-secondary non-tertiary	Lower and upper secondary	Tertiary		Primary to tertiary		Primary, secondary and post-secondary non-tertiary	Lower and upper secondary	Tertiary		Primary to tertiary	
			Including R&D	Excluding R&D	Including R&D	Excluding R&D			Including R&D	Excluding R&D	Including R&D	Excluding R&D
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	15 611	18 247	25 162	15 948	17 529	15 679	13 102	14 577	9 415	m	12 362	m
Austria	18 626	20 033	26 190	16 164	20 942	17 872	17 767	19 134	23 018	13 969	19 374	16 604
Belgium[1]	17 224	18 681[d]	25 989	16 724	19 024	17 121	16 467	17 765[d]	21 927	14 959	17 588	16 158
Canada[2]	15 778[d]	x(1)	27 582	m	18 733[d]	m	14 381[d]	x(7)	13 684	m	14 206[d]	m
Chile[3]	6 602[d]	6 991[d]	11 639[d]	11 145[d]	8 068[d]	7 924[d]	5 289	5 746	4 479	4 071	5 054	4 935
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	18 405	m	m	m	5 226	5 183	16 922	16 920	6 365	6 364
Czechia	11 847	13 995	17 221	11 147	12 844	11 717	10 724	12 528	12 777	7 890	11 105	10 198
Denmark	16 097	15 838	29 680	13 610	19 229	15 524	15 027	14 530	24 113	12 608	17 122	14 470
Estonia	10 827	10 093	19 011	10 447	12 362	10 755	10 303	9 616	15 291	9 163	11 239	10 090
Finland[1]	13 508	14 213[d]	20 456	10 850	15 000	12 937	13 465	14 147[d]	18 141	10 631	14 470	12 856
France	13 722	15 530	21 379	15 546	15 427	14 128	12 321	13 639	14 238	9 816	12 748	11 763
Germany	16 433	17 962	23 269	13 016	17 960	15 670	14 503	15 991	19 500	11 115	15 619	13 746
Greece	8 119	8 339	5 620	3 586	7 137	6 338	6 420	6 757	4 497	3 155	5 665	5 137
Hungary	7 900	7 987	20 476	16 881	10 097	9 469	6 905	6 964	12 931	9 674	7 957	7 388
Iceland	18 287[d]	17 297[d]	20 234	m	18 707[d]	m	17 753	16 436	18 209	m	17 851	m
Ireland	14 078	14 633	24 241	19 425	15 915	15 029	12 562	13 013	13 509	9 560	12 733	12 019
Israel	12 372	11 815	15 057	10 905	12 877	12 096	11 166	9 936	7 311	3 159	10 440	9 659
Italy[1]	13 459	12 622[d]	14 713	10 330	13 750	12 733	12 666	12 032[d]	8 992	5 376	11 813	10 973
Japan[4]	11 863[d]	13 090[d]	21 836[d]	m	14 130[d]	m	10 993[d]	11 528[d]	8 184[d]	m	10 355[d]	m
Korea	22 486	25 267	14 695	11 180	19 805	18 595	21 476	24 110	6 617	4 041	16 363	15 476
Latvia	8 355	8 846	12 416	9 203	9 204	8 532	7 806	8 137	6 873	4 582	7 611	7 132
Lithuania	10 030	10 083	15 950	11 247	11 313	10 294	9 375	9 430	11 151	7 100	9 759	8 882
Luxembourg	29 238	31 336	60 979	35 862	31 439	29 697	27 678	29 705	54 384	34 311	29 531	28 138
Mexico	3 406	3 422	7 519	6 422	4 066	3 890	2 790	2 702	4 430	3 333	3 053	m
Netherlands	17 287	19 058	24 874	16 306	19 186	17 042	15 254	15 665	18 511	11 621	16 069	14 345
New Zealand	11 112	12 154	18 729	13 514	12 389	11 515	9 742	10 290	11 444	8 151	10 027	9 475
Norway	20 407	20 954	29 917	19 278	22 558	20 152	19 797	19 863	27 256	17 902	21 484	19 368
Poland	10 423	9 947	15 897	10 348	11 488	10 408	8 927	8 512	12 558	8 107	9 634	8 767
Portugal[1]	12 586	13 832[d]	14 155	9 863	12 956	11 943	11 124	12 137[d]	8 038	4 557	10 396	9 574
Slovak Republic	9 784	9 492	19 178	14 217	11 259	10 480	9 056	8 793	15 241	10 620	10 027	9 301
Slovenia	13 005	12 661	21 127	16 865	14 454	13 694	11 644	11 145	17 189	13 871	12 634	12 042
Spain	12 231	13 322[d]	17 124	12 732	13 385	12 349	10 924	12 027[d]	11 741	7 954	11 117	10 224
Sweden	15 484	15 401	28 823	14 130	17 804	15 249	15 454	15 356	24 044	12 888	16 948	15 008
Switzerland[1]	m	13 990[d]	m	m	m	m	21 091	20 281[d]	32 505	15 569	23 381	19 983
Türkiye	4 032	4 087	10 825	7 119	5 305	4 611	3 374	3 369	7 698	5 344	4 184	3 743
United Kingdom	15 416	15 843	35 350	28 762	19 072	17 864	13 063	12 905	7 896	3 565	12 115	11 321
United States[5]	15 799	16 301	36 274	31 610	20 387	19 342	14 603	15 044	14 046	11 245	14 478	13 850
OECD average	13 527	14 096	21 444	14 512	15 023	13 458	12 438	12 750	15 102	9 904	12 780	11 843
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	4 448	4 939	3 329	m	4 137	m
Brazil	m	m	3 765	3 328	m	m	3 872	3 962	3 765	3 328	3 850	3 762
Bulgaria	7 624	7 769	12 680	12 104	8 703	8 580	7 397	7 479	8 198	7 891	7 568	7 502
China	4 596	5 473	7 157	m	5 161	m	4 042	4 663	4 256	m	4 089	m
Croatia	8 272	x(1)	11 429	m	9 033	m	7 781	x(7)	8 559	m	7 968	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	2 302	2 716	3 641	3 615	2 612	2 606	1 984	2 318	1 420	1 396	1 854	1 848
Romania	6 288	8 056	11 466	11 454	7 221	7 218	6 069	7 772	10 329	10 317	6 836	6 834
Saudi Arabia[5]	m	m	m	m	m	m	m	10 473	2 844	m	m	m
South Africa	3 477	3 750	15 726	m	4 395	m	3 108	3 322	11 504	m	3 737	m
EU25 average	12 898	13 739	20 574	13 836	14 285	13 116	11 905	12 595	15 830	10 489	12 541	11 631
G20 average	12 006	12 633	18 947	m	13 517	m	9 916	10 217	8 775	m	9 541	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table C1.2. Expenditure on educational institutions as a percentage of GDP, by level of education (2022)

Direct expenditure within educational institutions

	Total (government, private and non-domestic expenditure)						Government expenditure					
	Primary, secondary and post-secondary non-tertiary	Lower and upper secondary	Tertiary		Primary to tertiary		Primary, secondary and post-secondary non-tertiary	Lower and upper secondary	Tertiary		Primary to tertiary	
			Including R&D	Excluding R&D	Including R&D	Excluding R&D			Including R&D	Excluding R&D	Including R&D	Excluding R&D
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	3.9	2.1	1.6	1.0	5.4	4.8	3.2	1.7	0.6	m	3.8	m
Austria	2.9	1.9	1.8	1.1	4.7	4.0	2.8	1.8	1.6	1.0	4.3	3.7
Belgium[1]	4.0	2.5[d]	1.6	1.0	5.6	5.0	3.8	2.3[d]	1.3	0.9	5.2	4.7
Canada[2]	3.4[d]	x(1)	2.0	m	5.5[d]	m	3.1[d]	1.1	1.0	m	4.1[d]	m
Chile[3]	3.4[d]	1.9[d]	2.5[d]	2.4[d]	5.9[d]	5.8[d]	2.8	1.5	1.0	0.9	3.7	3.6
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	1.4	m	m	m	3.6	1.9	1.3	1.3	4.9	4.9
Czechia	3.1	2.3	1.0	0.7	4.2	3.8	2.8	2.0	0.8	0.5	3.6	3.3
Denmark	3.4	1.8	1.9	0.9	5.3	4.2	3.2	1.7	1.5	0.8	4.7	4.0
Estonia	3.2	1.5	1.3	0.7	4.5	3.9	3.0	1.4	1.0	0.6	4.0	3.6
Finland[1]	3.7	2.3[d]	1.5	0.8	5.2	4.5	3.7	2.3[d]	1.3	0.8	5.0	4.5
France	3.7	2.5	1.7	1.2	5.4	4.9	3.3	2.2	1.1	0.8	4.4	4.1
Germany	3.1	2.2	1.3	0.7	4.4	3.8	2.7	1.9	1.1	0.6	3.8	3.4
Greece	2.7	1.4	1.2	0.8	3.9	3.5	2.1	1.1	1.0	0.7	3.1	2.8
Hungary	2.2	1.4	1.2	1.0	3.4	3.2	1.9	1.3	0.8	0.6	2.7	2.5
Iceland	4.3[d]	2.0[d]	1.3	m	5.6[d]	m	4.1	1.9	1.2	m	5.3	m
Ireland	2.1	0.9	0.8	0.6	2.8	2.7	1.8	0.8	0.4	0.3	2.3	2.1
Israel	4.7	2.1	1.3	1.0	6.1	5.7	4.3	1.8	0.7	0.3	4.9	4.6
Italy[1]	2.9	1.8[d]	1.0	0.7	3.9	3.6	2.7	1.7[d]	0.6	0.4	3.3	3.1
Japan[4]	2.5[d]	1.4[d]	1.4[d]	m	3.9[d]	m	2.3[d]	1.3[d]	0.5[d]	m	2.9[d]	m
Korea	4.2	2.3	1.4	1.1	5.6	5.3	4.0	2.2	0.6	0.4	4.7	4.4
Latvia	2.7	1.4	1.1	0.8	3.8	3.5	2.5	1.3	0.6	0.4	3.1	2.9
Lithuania	2.5	1.7	1.1	0.8	3.7	3.3	2.4	1.6	0.8	0.5	3.2	2.9
Luxembourg	2.9	1.7	0.4	0.3	3.3	3.2	2.7	1.6	0.4	0.3	3.1	3.0
Mexico	3.0	1.5	1.3	1.1	4.3	4.1	2.5	1.2	0.8	0.6	3.2	m
Netherlands	3.4	2.1	1.6	1.1	5.0	4.5	3.0	1.8	1.2	0.8	4.2	3.7
New Zealand	3.8	2.2	1.3	0.9	5.1	4.8	3.4	1.9	0.8	0.6	4.1	3.9
Norway	4.4	2.3	1.9	1.2	6.2	5.6	4.2	2.1	1.7	1.1	5.9	5.4
Poland	3.0	1.9	1.1	0.7	4.1	3.7	2.6	1.6	0.9	0.6	3.4	3.1
Portugal[1]	3.6	2.2[d]	1.2	0.9	4.8	4.4	3.2	1.9[d]	0.7	0.4	3.9	3.6
Slovak Republic	3.1	1.9	1.1	0.8	4.2	3.9	2.8	1.8	0.9	0.6	3.7	3.5
Slovenia	3.4	1.7	1.2	1.0	4.6	4.4	3.0	1.5	1.0	0.8	4.0	3.8
Spain	3.2	1.9	1.4	1.0	4.5	4.2	2.8	1.7	0.9	0.6	3.8	3.5
Sweden	3.8	1.9	1.5	0.7	5.3	4.5	3.8	1.9	1.2	0.7	5.1	4.5
Switzerland[1]	m	1.1	m	m	m	m	3.1	1.6[d]	1.2	0.6	4.3	3.7
Türkiye	2.1	1.5	1.3	0.9	3.4	3.0	1.8	1.2	0.9	0.6	2.7	2.4
United Kingdom	4.0	2.2	2.1	1.7	6.1	5.7	3.4	1.8	0.5	0.2	3.9	3.6
United States[5]	3.5	1.8	2.3	2.0	5.8	5.5	3.2	1.7	0.9	0.7	4.1	3.9
OECD average	3.3	1.9	1.4	1.0	4.7	4.3	3.0	1.7	0.9	0.6	4.0	3.6
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	3.2	1.8	0.9	m	4.1	m
Brazil	m	m	0.9	0.8	m	m	3.6	2.2	0.9	0.8	4.4	4.3
Bulgaria	2.3	1.6	1.0	1.0	3.3	3.3	2.2	1.5	0.7	0.6	2.9	2.9
China	2.8	1.6	1.3	m	4.1	m	2.5	1.3	0.7	m	3.3	m
Croatia	2.4	x(1)	1.0	m	3.4	m	2.2	x(7)	0.8	m	3.0	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	2.9	1.5	1.4	1.4	4.2	4.2	2.5	1.3	0.5	0.5	3.0	3.0
Romania	1.8	1.4	0.7	0.7	2.5	2.5	1.7	1.3	0.6	0.6	2.4	2.4
Saudi Arabia[5]	m	m	m	m	m	m	m	1.7	0.3	m	m	m
South Africa	5.0	2.2	1.8	m	6.9	m	4.5	1.9	1.3	m	5.8	m
EU25 average	3.0	1.8	1.2	0.8	4.2	3.9	2.8	1.7	0.9	0.6	3.7	3.4
G20 average	3.4	1.9	1.5	m	5.0	m	3.1	1.7	0.8	m	3.9	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table C1.3. Change in expenditure on education, by level of education (2015 to 2022)

Change in per cent, constant 2020 prices in equivalent USD converted using PPPs

	Primary, secondary and post-secondary non-tertiary			Tertiary (including R&D)			Primary to tertiary (including R&D)				
	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in government expenditure on educational institutions	Change in government expenditure on education as a share of government expenditure on all services
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Australia	m	m	m	m	m	m	m	m	m	m	m
Austria	0.7	2.8	3.6	12.4	2.5	15.2	4.9	2.7	7.8	5.1	-9.6
Belgium	6.8	1.2	8.0	9.7	10.0	20.6	8.2	2.9	11.3	10.2	0.2
Canada[1]	9.9[d]	3.3	13.5[d]	-6.9	17.2	9.1	5.1[d]	6.4	11.8[d]	8.9[d]	-10.0[d]
Chile[2]	19.6[d]	4.2	24.6[d]	33.5[d]	5.8	41.2[d]	25.3[d]	4.6	31.1[d]	27.5	-3.9
Colombia	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	-2.0	m	m	-54.7	m	m	-12.0	m	-5.4	-42.1
Czechia	26.2	10.9	40.0	19.2	-10.9	6.1	22.2	6.1	29.7	34.1	11.0
Denmark	m	m	m	m	m	m	m	m	m	m	m
Estonia	19.8	12.5	34.8	8.9	-16.3	-8.8	12.0	5.7	18.5	27.2	-0.9
Finland	0.2	0.7	0.9	-13.5	12.2	-3.0	-3.2	3.0	-0.3	-1.2	-7.2
France	6.3	1.4	7.8	1.4	21.2	22.9	6.5	5.2	12.0	6.2	-3.6
Germany	14.2	-0.4	13.7	3.3	10.0	13.5	11.7	1.7	13.7	15.2	-6.1
Greece	2.4	1.1	3.5	7.1	25.0	33.9	1.8	9.3	11.3	0.3	-6.1
Hungary	5.9	-6.8	-1.3	83.3	-3.7	76.6	24.8	-6.3	17.0	7.4	-13.8
Iceland	19.1[d]	3.2	22.9[d]	16.6	13.8	32.7	18.7[d]	5.3	25.1[d]	26.0	-10.0
Ireland	33.7	5.0	40.4	18.4	14.5	35.5	30.4	6.6	39.0	33.7	9.2
Israel	23.8	15.9	43.6	11.1	13.5	26.1	20.7	15.5	39.3	m	m
Italy	9.4	-3.6	5.5	-4.4	18.9	13.6	6.5	0.8	7.4	8.3	-6.1
Japan[3]	5.1[d]	-6.4	-1.7[d]	1.8[d]	1.0[d]	2.9[d]	4.9[d]	-4.8[d]	-0.1[d]	2.1[d]	-10.4[d]
Korea	72.1	-13.3	49.3	22.7	-13.7	6.0	56.1	-13.4	35.2	60.2	0.2
Latvia	-9.7	2.5	-7.4	-9.7	-10.6	-19.3	-10.6	-0.5	-11.1	-18.0	-36.6
Lithuania	42.7	-5.8	34.4	24.4	-22.7	-3.9	33.3	-10.1	19.8	20.0	-10.5
Luxembourg	9.4	11.1	21.5	-4.6	10.8	5.7	7.2	11.1	19.1	18.4	-8.8
Mexico	-9.7	-4.3	-13.6	-26.9	36.0	-0.6	-10.5	0.5	-10.1	-15.4	-16.2
Netherlands	17.1	-3.8	12.7	-4.2	19.0	13.9	11.9	1.1	13.1	16.9	1.9
New Zealand	22.0	2.7	25.3	0.0	-12.0	-12.0	13.2	-0.1	13.1	22.3	-17.3
Norway	0.9	3.1	4.0	1.2	17.4	18.9	1.9	6.0	8.1	4.5	-6.1
Poland	23.2	0.7	24.0	30.4	-17.5	7.6	23.4	-3.4	19.1	14.6	-18.1
Portugal	11.9	-6.5	4.6	-8.7	21.8	11.1	7.4	-1.1	6.2	7.6	4.1
Slovak Republic	22.3	2.9	25.9	1.9	-18.1	-16.5	12.0	-1.1	10.8	15.4	2.3
Slovenia	15.4	11.2	28.4	54.3	-7.1	43.3	22.8	7.5	31.9	30.3	11.7
Spain	12.4	2.6	15.4	2.3	17.1	19.8	10.4	5.7	16.7	20.3	2.5
Sweden	5.3	14.9	21.0	-8.0	16.1	6.8	1.3	15.1	16.6	16.4	4.1
Switzerland	m	5.3	m	m	14.5	m	m	7.0	m	11.2	-1.0
Türkiye	-13.3	6.0	-8.2	-4.8	15.4	9.9	-9.0	7.6	-2.0	-1.1	-18.0
United Kingdom	6.8	-2.2	4.5	2.7	22.4	25.6	9.2	1.5	10.8	3.2	-13.4
United States	m	m	m	m	m	m	m	m	m	m	m
OECD average	13.5	2.1	15.7	8.6	5.0	14.2	11.9	2.5	14.7	13.1	-6.9
Partner and/or accession countries											
Argentina	m	4.1	m	m	25.4	m	m	9.2	m	-19.9	-14.9
Brazil	m	m	m	m	m	m	m	m	m	-7.0	m
Bulgaria	64.3	-6.2	54.1	31.0	-17.4	8.2	49.4	-8.8	36.1	53.6	15.2
China	m	10.1	m	m	31.8	m	m	14.2	m	m	m
Croatia	m	-6.9	m	m	-1.2	m	m	-5.6	m	32.0	m
India	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m
Peru	m	9.6	m	m	8.2	m	m	9.3	m	m	m
Romania	37.2	-6.1	28.8	12.5	1.9	14.6	30.6	-4.8	24.4	31.4	-5.3
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	0.9	m	m	2.5	m	m	1.0	m	m	m
EU25 average	16.4	1.5	18.3	11.6	3.1	13.8	14.1	1.8	16.1	16.9	-3.1
G20 average	m	-0.4	m	m	15.7	m	m	2.5	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table C1.4. Distribution of government funds devoted to education, by level of government and level of education (2022)

Percentage of total government expenditure on education before and after transfers

	Primary, secondary and post-secondary non-tertiary						Tertiary (including R&D)					
	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)			Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	Regional	Local	Central	Regional	Local	Central	Regional	Local	Central	Regional	Local
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	35.7	64.3[d]	x(2)	21.3	78.7[d]	x(5)	90.6	9.4[d]	x(8)	88.3	11.7[d]	x(11)
Austria	74.8	12.9	12.2	37.6	49.6	12.8	96.0	3.2	0.9	96.1	3.0	0.9
Belgium	21.6	75.9	2.5	21.5	74.6	3.9	16.7	81.1	2.2	15.6	81.3	3.1
Canada[1]	4.7[d]	79.3[d]	16.0[d]	4.2[d]	11.5[d]	84.3[d]	m	m	m	m	m	m
Chile[2]	97.1	a	2.9	64.0	a	36.0	100.0	a	0.0	100.0	a	0.0
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	100.0	a	a	100.0	a	a	100.0	a	a	100.0	a	a
Czechia	10.7	66.7	22.5	8.6	68.8	22.5	96.4	2.1	1.5	96.3	2.2	1.5
Denmark	30.1	a	69.9	37.0	a	63.0	100.0	a	0.0	100.0	a	0.0
Estonia	58.1	a	41.9	30.9	a	69.1	99.8	a	0.2	99.6	a	0.4
Finland	34.0	a	66.0	8.9	a	91.1	96.8	a	3.2	96.8	a	3.2
France	73.2	15.5	11.3	73.1	15.5	11.4	91.1	7.7	1.2	91.2	7.6	1.3
Germany	6.1	75.4	18.5	4.7	70.1	25.2	31.5	67.9	0.6	24.8	74.5	0.8
Greece	100.0	a	0.0	91.3	a	8.7	100.0	a	a	100.0	a	a
Hungary	92.0	a	8.0	92.0	a	8.0	99.9	a	0.1	99.9	a	0.1
Iceland[3]	23.7[d]	a	77.5	23.3[d]	a	78.0	100.1[d]	a	-0.1	100.0[d]	a	0.0
Ireland	100.0	a	a	100.0	a	a	100.0	a	a	100.0	a	a
Israel	88.9	a	11.1	67.7	a	32.3	96.5	a	3.5	96.2	a	3.8
Italy	87.0	6.2	6.8	86.3	5.8	7.9	84.3	15.4	0.3	82.3	17.4	0.3
Japan[4]	17.3	53.2	29.5	0.7	30.1	69.2	90.4[d]	9.3[d]	0.3[d]	89.7[d]	9.9[d]	0.4[d]
Korea	82.9	15.1	2.0	1.0	53.3	45.7	96.3	2.3	1.4	96.3	2.3	1.4
Latvia	59.6	a	40.4	17.4	a	82.6	99.5	a	0.5	99.5	a	0.5
Lithuania	74.2	a	25.8	20.9	a	79.1	99.0	a	1.0	99.0	a	1.0
Luxembourg	90.1	a	9.9	90.1	a	9.9	99.8	a	0.2	99.8	a	0.2
Mexico	78.9	21.1	0.0	27.7	72.1	0.2	82.6	17.4	0.0	79.9	19.9	0.2
Netherlands	94.9	0.0	5.1	92.0	0.0	8.0	100.0	0.0	a	100.0	0.0	a
New Zealand	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0
Norway	11.9	a	88.1	9.3	a	90.7	99.2	a	0.8	98.4	a	1.6
Poland	56.9	1.0	42.1	3.6	1.6	94.8	99.8	0.1	0.1	99.8	0.1	0.1
Portugal	80.8	6.3	12.9	80.8	6.3	12.9	99.6	0.3	0.1	99.6	0.3	0.1
Slovak Republic	78.9	a	21.1	25.9	a	74.1	99.6	a	0.4	99.3	a	0.7
Slovenia	88.1	a	11.9	86.3	a	13.7	99.5	a	0.5	99.5	a	0.5
Spain	11.1	82.9	6.0	11.1	82.9	6.0	19.4	79.7	1.0	19.4	79.7	1.0
Sweden	m	m	m	m	m	m	m	m	m	m	m	m
Switzerland	3.1	63.1	33.8	0.9	60.9	38.2	33.5	66.3	0.2	16.7	83.1	0.2
Türkiye	99.0	a	1.0	99.0	a	1.0	99.9	a	0.1	99.9	a	0.1
United Kingdom	61.0	a	39.0	61.0	a	39.0	100.0	a	0.0	100.0	a	0.0
United States[5]	12.1	39.2	48.7	0.9	1.8	97.3	62.9	28.2	8.9	62.9	28.2	8.9
OECD average	59.4	18.8	22.4	44.5	19.0	37.6	88.0	11.2	0.9	87.1	12.0	0.9
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	75.4	23.3	1.3	75.3	23.4	1.3
Bulgaria	94.1	a	5.9	32.5	a	67.5	100.0	a	0.0	100.0	a	0.0
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	31.5	60.5	8.0	31.5	60.5	8.0	86.6	13.3	0.2	86.6	13.3	0.2
Romania	70.5	a	29.5	70.5	a	29.5	100.0	a	0.0	100.0	a	0.0
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	65.5	14.9	20.4	50.3	16.3	34.9	88.7	10.7	0.6	88.2	11.1	0.7
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

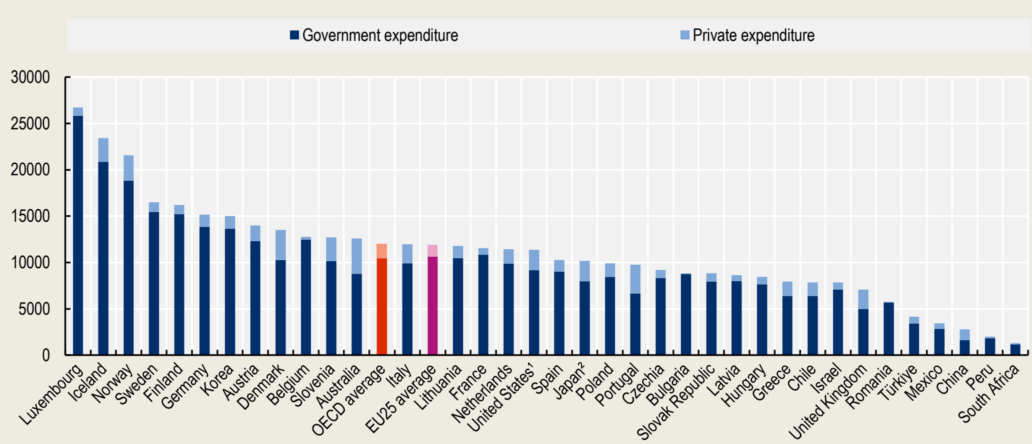
Chapter C2. How is early childhood education financed?

Highlights

- OECD countries spent an average of USD 13 331 per child on early childhood education (ECE) in the 2022 financial year, with most of the expenditure (USD 11 483 on average) coming from government sources. Total expenditure per child at this level slightly exceeds expenditure per full-time student at primary level.
- Although enrolment numbers in pre-primary education (ISCED 02) have remained stable between 2015 and 2022 on average across the OECD, governments of OECD countries have increased funding at this level by 23%. As a result, government expenditure per child in pre-primary education increased by 24% on average between 2015 and 2022 across OECD countries.
- At pre-primary level, three-quarters of funds go to public institutions while the remainder go to either government-dependent or independent private institutions, closely mirroring the distribution of enrolment across institution types.

Figure C2.1. Government and private expenditure per child in pre-primary education (2022)

In equivalent USD converted using PPPs, direct expenditure on educational institutions



Note: Expenditure per child is based on headcounts rather than full-time equivalent students.
1. Year of reference differs from 2022.
2. Data do not cover day care centres and integrated centres for early childhood education.
For data, see Table C2.1. For a link to download the data, see Tables and Notes section.

Context

Investment into early childhood education (ECE) can ensure better access and higher-quality care for young children. Furthermore, expenditure dedicated to ECE can be a policy lever to increase women's labour-market participation rates and promote equity by ensuring strong foundations for further learning for disadvantaged children. Widely available and affordable early childhood education is also used a means to increase birth rates and limit demographic decline.

Interpreting ECE funding requires different consideration than at other levels of education. Young children require close and frequent adult supervision, raising the cost of provision. The ages covered by ECE contains a mix of compulsory and non-compulsory (but sometimes free) years of education, the structure of which varies across countries. Furthermore, while primary and secondary students generally attend full-day programmes, ECE programmes vary widely in how long children attend each day. Yet data on hours of participation are limited, making it impossible to calculate the full-time-equivalent (FTE) enrolment counts that are the basis for the per-student expenditure data used in other chapters. As a result, expenditure per child at the early childhood educational development and pre-primary levels is based on total spending divided by headcount enrolment, rather than FTE students. This may distort comparisons, as countries with shorter attendance hours can appear to invest less per child. In addition, not all countries report finance data for early childhood educational development, limiting most analysis to pre-primary education. The data also only cover programmes meeting ISCED classification criteria, such as requiring at least 2 hours of educational activities per day and 100 days a year (see the *Definitions* section in Chapter B2). The figures in this chapter do not capture provision without such explicit educational requirements, or home-based or informally organised care, underestimating the scale of early childhood education in countries where such arrangements are common.

Other findings

- On average, OECD countries dedicate the equivalent of 0.59% of GDP to the education of children aged 3 to 5. The countries spending the highest amount on this age group are Iceland (1.05% of GDP), Norway (0.87%) and Israel (0.85%).
- In the last decade, 12 countries lowered the starting age of compulsory education to include one or more years of pre-primary education. In Bulgaria, Czechia and Lithuania, this resulted in increased spending on pre-primary education but in the rest the change had little impact on pre-primary expenditure. As enrolment rates were already high in most of these countries, the reforms served to formalise existing levels of attendance rather than prompting significant changes in enrolment.
- Systems that rely more on private funding are not more generous overall: there is no correlation between the amount of expenditure per child and the share of that amount funded by private stakeholders (mostly families).

Analysis

Distribution of sources of funding for pre-primary programmes

The vast majority of funding for pre-primary institutions comes from government sources (around USD 10 500 on average across OECD countries compared to around USD 1 500 coming from private sources), as shown in Figure C2.1. This breakdown is consistent with funding patterns observed at primary, secondary and post-secondary non-tertiary levels (see Table C1.1). In Belgium, Bulgaria, Luxembourg and Romania, 95% or more of funding was disbursed by the government in 2022. Of these, over 90% of funding in Bulgaria, Luxembourg and Romania was spent on public institutions (Table C2.3). Meanwhile, Belgium's expenditure on pre-primary education is split nearly equally between public and government-dependent private institutions, illustrating the government allocation of funding set by the School Pact of 1958 (Franken and Leivens, 2022[1]).

In contrast, Australia, China, Portugal and the United Kingdom report shares of funding coming from private sources that are relatively larger compared to other countries. While this might reflect high out-of-pocket childcare costs paid by families, it is not necessarily the case. Figure C2.1 presents final sources of funds, which means that government transfers to households (e.g. childcare subsidies or voucher schemes) are included in private expenditure, because they are channelled to providers through families. As a result, the private share in some countries may partly include publicly supported financing mechanisms to make childcare more affordable for disadvantaged families. This is the case for Portugal, where relatively high childcare fees paid by families are offset by similarly high amounts of benefits and rebates (OECD, 2022[2]).

The emphasis here is on pre-primary education (ISCED 02), as data availability across OECD countries is better at this level; 21 OECD countries do not report finance data for early childhood educational development (ISCED 01). It is also worth noting that Figure C2.1 refers to expenditure per child, rather than per full-time equivalent student (which is the standard measure used for primary to tertiary education). This means that a child who spends eight hours a day in pre-primary education and one that spends four hours a day will both count as one child, whereas if they were in primary education, the first would count as one full-time equivalent, the second as 0.5.

Investing in children aged 3 to 5

Figure C2.2 compares countries based on their expenditure on educational institutions for children aged 3 to 5 as a percentage of GDP. Measuring spending on 3-5 year-olds allows comparisons to be made between countries regardless of where they draw the line between early childhood education and primary education. In addition, unlike measures that focus on a particular level of education, it is not affected by differences in the age composition of the target population. Age greatly influences expenditure spent per child – younger children require higher adult-child ratios, leading to higher personnel costs per child. But children start and complete different stages of early childhood education such as pre-primary at different ages in different countries, creating different population make-ups at each level (see Chapter B2). All other things being equal, spending per child in pre-primary education will be higher in countries where primary education starts relatively early and the average age of children in pre-primary education is relatively young. Comparing expenditure for a defined age group such as 3-5 year-olds addresses this and offers a clearer basis for cross-country comparison, as it limits the effect of national enrolment age policies.

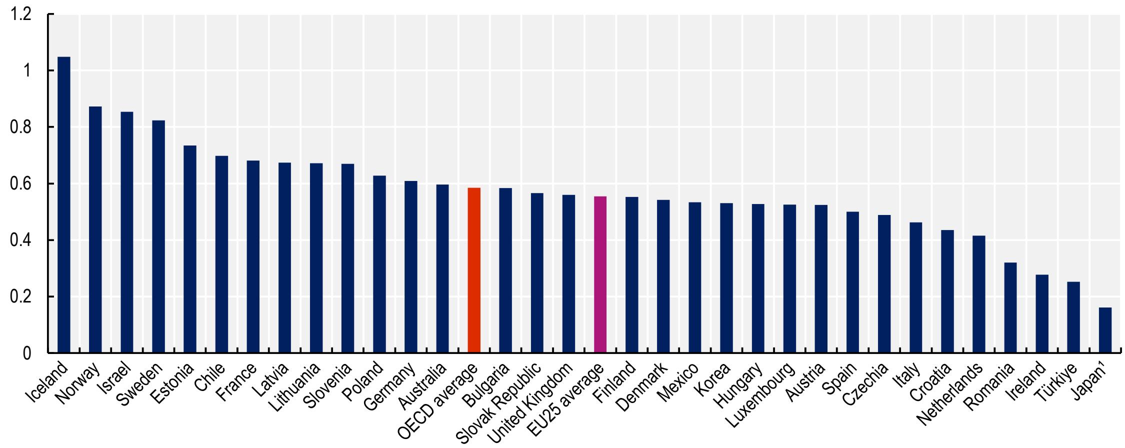
The age group of 3-5 year-olds is also of particular interest, as it marks a point where national policies on compulsory education diverge. As of 2023, compulsory education starts after the age 5 in 22 out of the 38 OECD countries. For these countries, public spending on 3-5 year-olds as a percentage of GDP could naturally appear lower, not necessarily due to limited investment, but because enrolment rates may be lower among children who have not yet reached the official starting age of compulsory schooling.

Figure C2.2 indicates that total education expenditure on 3-5 year-olds averages 0.59% of GDP across OECD countries, with the highest shares in Iceland (1.05% of GDP), Norway (0.87%), Israel (0.85%) and Sweden (0.82%), all over one-third more than the OECD average (Table C2.1). In addition to reflecting these countries' economic priorities, these high ratios of investment in ECE could also be partially shaped by the geographical distribution of their populations: operational costs (e.g. administration and capital goods such as the construction of ECE centres) increase as population densities fall, because fixed costs must be borne regardless of the number of children enrolled.

One important caveat is that, in common with the other data in this chapter, Figure C2.2 does not fully capture types of early childhood education that do not fit ISCED criteria. In countries where institutional settings without explicit educational components or home- or family-based arrangements are common, it will underestimate investment in the early years.

Figure C2.2. Total expenditure on children aged 3 to 5 as a percentage of GDP (2022)

In per cent, direct expenditure on educational institutions



1. Data do not cover day care centres and integrated centres for early childhood education.
For data, see Table C2.1. For a link to download the data, see Tables and Notes section.

Over the past decade, public investment in early childhood education (ECE) has increased steadily across OECD countries. For instance, as shown in Figure C2.6 below, government expenditure in pre-primary education rose in most countries between 2015 and 2022 (in constant prices). This has often accompanied higher enrolment rates at this level (see Chapter B1). One potential driver of this has been the move in several countries in the last decade to lower the starting age of compulsory education. Box C2.1 explores changes in the patterns of ECE spending among countries that have recently lowered their starting age of compulsory education.

Box C2.1. Reforms to the starting ages of compulsory education and the impact on expenditure

This box explores how lowering the starting age of compulsory education might have affected patterns of public expenditure. In the past decade, 12 OECD and partner countries have implemented such reforms: Belgium (2020), Bulgaria (2017 and 2021), Costa Rica (2018), Czechia (2017), Finland (2015), France (2019), Greece (2020), Hungary (2015), Lithuania (2016), Romania (2020), the Slovak Republic (2021) and Sweden (2018). These reforms lowered the starting age of compulsory education by one to three years, affecting pre-primary programmes (for more details see Table B2.1 in *Education at a Glance 2024* (OECD, 2024[3])).

Figure C2.3 shows trends in government expenditure on pre-primary education (dark blue line). The red dotted line indicates the final year before the reform was implemented, to distinguish trends before and after the policy change. The figure also includes expenditure patterns for early childhood educational development and primary education to provide context. In most countries, spending at all three levels followed parallel trajectories before the reform, suggesting common drivers such as macroeconomic conditions or broader education funding trends. This helps strengthen the case for any post-reform changes in pre-primary spending having been driven by the reform itself.

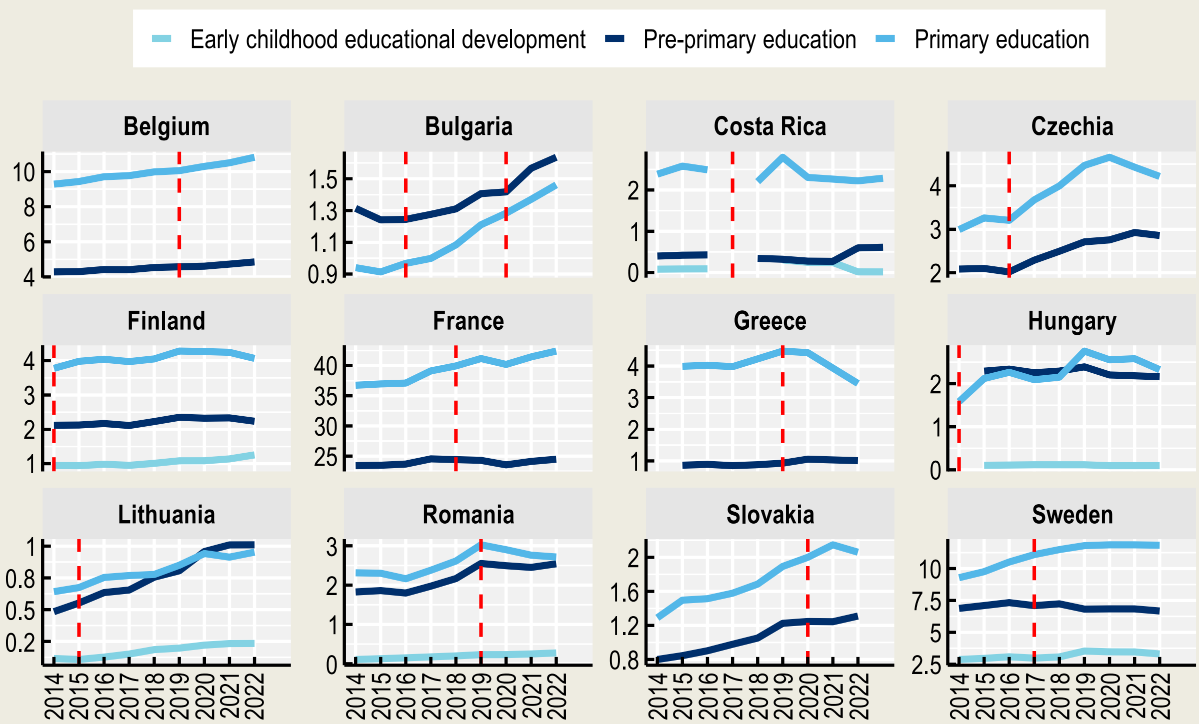
How did spending change after the reform?

- Pre-primary expenditure generally continued along pre-existing trends, with no sharp increase at the time the reform was implemented. This suggests that in many of these countries, spending adjustments were either not directly tied to the reform or masked by other events occurring around that time. Expanding ECE participation may have already been a priority, with the reform simply formalising ongoing efforts.

- Expenditure on pre-primary education increased after the reforms in Bulgaria and Lithuania, while Czechia experienced a modest but clear increase in pre-primary spending in the year of the reform and this upward trend continued through 2021.
- There was no clear link between trends in spending and the number of years by which the starting age of compulsory education was reduced – even in countries that implemented more substantial reforms. For example, Czechia and Hungary reduced the starting age by two years, and France by three, while all other countries made only a one-year change. This suggests that even far-reaching reforms do not necessarily translate into substantial or immediate budgetary shifts.

Figure C2.3. Trends in government expenditure on ECE and primary institutions (2014 to 2022)

Countries with recent changes in the duration of compulsory pre-primary education, in billions USD in constant prices



Note: The red dotted line marks the final year before the reform extending compulsory ECE was implemented. Bulgaria introduced two reforms to the starting age of compulsory education, in 2017 and again in 2021. Pre-primary education is highlighted in dark blue; other levels are shown for context. Given the variation in expenditure levels across countries, direct cross-country comparisons should be made with caution.
For a link to download the data, see Tables and Notes section.

What could explain the observed trends?

- In systems where enrolment at the affected ages was already nearly universal, reforms only had a marginal effect on enrolment. In some cases, reforms strategically targeted disadvantaged subgroups – such as socio-economically at-risk children in Lithuania (Eurydice, 2023[4]) or migrant and low-educated families in Belgian cities (European Commission, 2020[5]) – thus affecting a relatively small number of children and limiting the need for substantial new investment.
- Free access or legal entitlements to an ECE place may have also played important roles in shaping expenditure growth in the years prior to or around the reform. In Belgium, Bulgaria, Hungary, Lithuania,

Romania and Sweden, free early education was already available to children below the new compulsory age (for more details see Table X1.3 in Annex 1). When it comes to entitlements, in Czechia, for instance, from 2018 municipalities were required to guarantee subsidised places for all children over age 3, upon parental request (European Commission / EACEA / Eurydice, 2025[6]). Such measures can drive higher spending even without major enrolment increases, as governments must ensure adequate provision in advance of implementation. Much of the investment may also have already occurred, limiting the need for a sharp rise in public spending at the time of reform.

- The COVID-19 pandemic and countries' fiscal situation might have shaped implementation and spending patterns. Belgium, Bulgaria, Greece, Romania and the Slovak Republic implemented reforms in 2020-21. Belgium and Bulgaria recorded increases in spending while Greece saw a decline. This might have been driven by economic factors: Belgium and Bulgaria entered the pandemic with stronger fiscal capacity, allowing for additional investment in pre-primary education despite the crisis. In Bulgaria, for example, a 2022 reform abolished fees for public nurseries and kindergartens to promote access and equity (OECD, 2023[7]). In contrast, Greece's ability to scale up provision may have been constrained by limited public investment capacity (OECD, 2020[8]).
- The timing and design of budget processes also matter. In some countries, the allocation of expenditure to ECE is not directly tied to changes in enrolment policy, meaning that reforms to lower the starting age of compulsory education may not immediately influence overall government spending. Shifts in political regimes or ruling parties can also affect budget priorities and the pace of fiscal adjustments, influencing how quickly and to what extent spending responds to enrolment reforms.

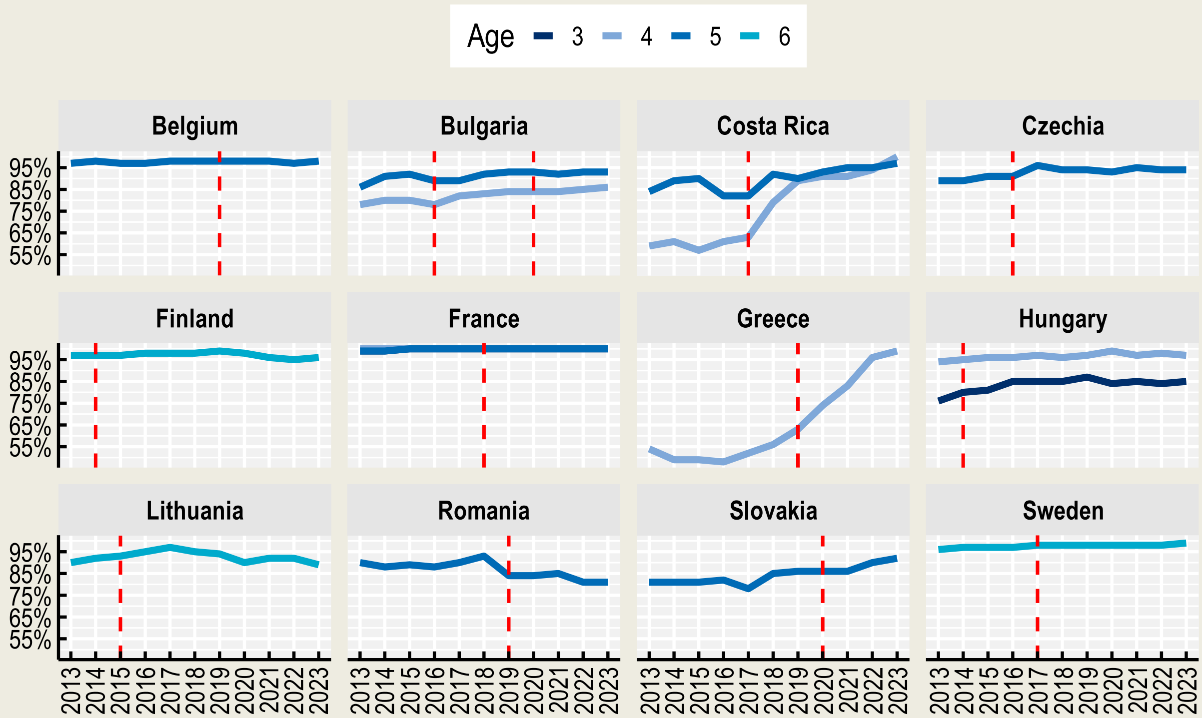
How did enrolment patterns evolve in the light of the reform?

Figure C2.4 shows enrolment trends in pre-primary institutions by age, with each line representing a different age group affected by the reform.

- In most countries, enrolment rates were high (between 80% and 90%) even before the reform, limiting the room for additional increases. Reforms required only marginal adjustments, if any, in capacity or staffing, rather than large-scale system expansion.
- Costa Rica is the only country where the reform was followed by a sharp increase in enrolment rates: from 60% to 80% among 4-year-olds in the year of the reform, rising to 90% the following year, and reaching near universal coverage by 2023. Among 5-year-olds, enrolment rates were stable prior to the reform and increased from around 80% to 90% in the year of the reform. A comparable, though smaller, shift occurred in Czechia, where enrolment rates among 5-year-olds rose from around 90% to 95% in the year of the reform.
- In Greece, enrolment rates among 4-year-olds had been rising strongly prior to the reform and continued to increase after it, going from around 65% to 95% in ten years. This suggests that families' or local authorities' anticipation of the reform or the implementation of other policy reforms were the main drivers of increasing enrolment.

Figure C2.4. Trends in pre-primary enrolment rates (2013 to 2023)

Age groups affected by the extension of compulsory pre-primary education



Note: Each line represents a different age affected by the reform to compulsory education starting age. The red dotted line marks the final year before the reform extending compulsory ECE was implemented. Bulgaria introduced two reforms to the starting age of compulsory education: one in 2017 lowering it to age 5, and another in 2021 lowering it further to age 4.
For a link to download the data, see Tables and Notes section.

Overall, recent reforms to lower the starting age of compulsory education did not lead to major shifts in public expenditure or enrolment, but this does not imply they were ineffective. Rather, the limited fiscal and enrolment impacts in many countries reflect the fact that early childhood education was already a policy priority, with high participation rates and infrastructure largely in place prior to the reform. In such contexts, the reforms served to consolidate progress, extend legal guarantees or improve equity – particularly when targeted at disadvantaged groups. These findings suggest that the success of compulsory age reforms cannot be measured solely by short-term spending or enrolment changes, but must also consider broader policy goals, such as formalisation, inclusivity and long-term system development.

Pre-primary expenditure by type of institution

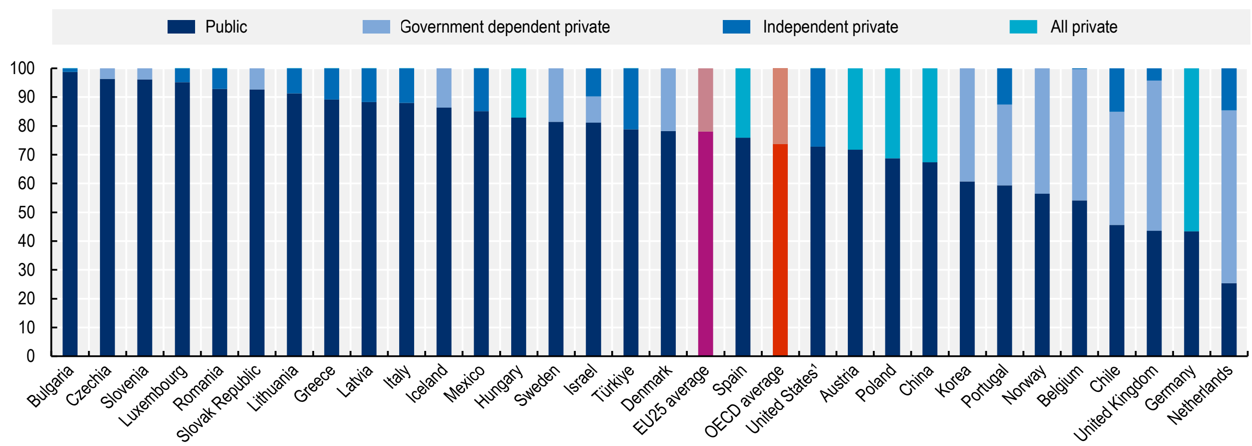
Figure C2.5 presents the distribution of total expenditure across public and private pre-primary institutions. It shows the extent to which funding is channelled into publicly governed or privately managed models (which may be heavily government funded, in the case of government-dependent private institutions). For most OECD countries, the breakdown of funding by type of institution mirrors very closely that of enrolment at pre-primary level (see Table B1.3). However, in Italy and Luxembourg, independent private institutions educate a relatively large share of children yet receive a smaller proportion of total spending. In Israel, government-dependent private institutions are underfunded relative to their enrolment share, while independent private providers receive double the share of funding compared to their share of students (Table C2.3).

The countries dedicating 10% of expenditure or more to independent private institutions are all those spending at or below the OECD average per child at pre-primary level. This may reflect a structural reliance on non-public provision for both enrolment availability and funding (Table C2.1).

The OECD average of the share of funding dedicated to public institutions is slightly higher for pre-primary education than for early childhood education and development. This is largely driven by differences in the distribution of enrolment patterns between public and private institutions across these two levels of education (see Table B1.3).

Figure C2.5. Distribution of expenditure on pre-primary education, by type of educational institution (2022)

In per cent, direct expenditure on educational institutions



1. Year of reference differs from 2022.
For data, see Table C2.3. For a link to download the data, see Tables and Notes section.

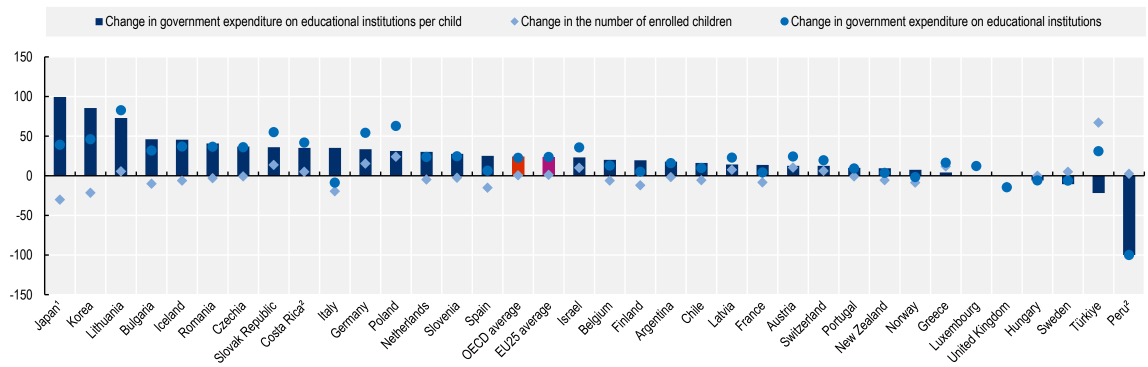
Trends in pre-primary government expenditure per child

Figure C2.6 examines changes in government expenditure per child in pre-primary institutions between 2015 and 2022. A change in government expenditure on educational institutions per child can be driven by two factors: the change in total government expenditure (measured in constant 2020 prices) and the change in the number of children enrolled. In 25 countries with data available, government expenditure per child increased during this period. In 18 of these 25 countries, the increase was driven by a fall in the number of children enrolled. For instance, Japan's government expenditure towards kindergartens and Kindergarten Departments of Special Needs Education Schools grew by nearly 40% despite the number of children enrolled in these programmes dropped by 30%. One possible reason for this expenditure growth is a 2019 reform that provides free early childhood education and care for children aged 3 to 5.

However, some countries show a different trajectory. Hungary, Sweden, the Republic of Türkiye and the United Kingdom experienced a decline in government expenditure per child between 2015 and 2022. In three of these – Hungary, Sweden and the United Kingdom – this decline was driven by a reduction in government spending (in constant prices). Italy also recorded a drop in public expenditure, although this was offset by falling enrolment, keeping spending per child stable overall (Figure C2.6).

Figure C2.6. Change in the number of enrolled children, government expenditure on educational institutions and expenditure per child in pre-primary education (2015 to 2022)

In per cent, constant 2020 prices



Note: Expenditure per child is based on headcounts rather than full-time equivalent students.
1. Data do not cover day care centres and integrated centres for early childhood education.
2. Full-time equivalent is used in the calculation of expenditure per child.
For data, see Table C2.5 (available on line). For a link to download the data, see Tables and Notes section.

Definitions

Educational institutions can be classified into two different categories: public and private. An institution is classified as private if its overall control and management rest with a non-governmental organisation (e.g. a church, trade union, business enterprise or foreign or international agency) and if most of the members of its governing board are not selected by a public agency. The terms "government-dependent" and "independent" are used to distinguish private institutions. A government-dependent private institution is a private institution that receives 50% or more of its core funding from government agencies, or one whose teaching personnel are paid by a government agency or by government directly. An independent private institution is a private institution that receives less than 50% of its core funding from government agencies and whose teaching personnel are not paid by a government agency.

For the definitions of direct government expenditure on educational institutions, and direct private expenditure on educational institutions, refer to Chapter C1.

Methodology

Expenditure per child on educational institutions for early childhood education development and pre-primary levels is calculated by dividing total expenditure on educational institutions at that level by the corresponding sum of full-time and part-time enrolment, resulting in total expenditure on educational institutions per head count as opposed to per full-time equivalent student.

For an overview of the methodology, see Chapter C1. For more detailed information, please refer to the [OECD Handbook for Internationally Comparative Education Statistics](#) (OECD, 2018[9]). For country-specific notes, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (*https://doi.org/10.1787/fcfaf2d1-en*).

Source

For the data sources used in this Chapter, refer to Chapter C1. For additional details, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (*https://doi.org/10.1787/fcfaf2d1-en*).

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OECD (2020), *OECD Economic Surveys: Greece 2020*, OECD Publishing, Paris, https://doi.org/10.1787/b04b25de-en. [8]

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Tables and Notes

Chapter C2 Tables

Table C2.1	Total expenditure and government expenditure on early childhood education per child as a percentage of GDP per capita and as a percentage of GDP (2022)
Table C2.2	Distribution of expenditure on early childhood educational institutions, by source of expenditure (2022)
Table C2.3	Distribution of expenditure on early childhood education, by type of educational institution (2022)
WEB Table C2.4	*Distribution of central, regional and local government funds devoted to early childhood education, before and after transfers between levels of government (2022)*
WEB Table C2.5	*Change in government expenditure on pre-primary education (2015 to 2022)*

StatLink https://stat.link/v59ehj

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table C2.1. Total expenditure and government expenditure on early childhood education per child as a percentage of GDP per capita and as a percentage of GDP (2022)

Note: Columns showing data on expenditure on educational institutions as a percentage of GDP are available for consultation on line.

1. Total expenditure on educational institutions includes payments by households outside educational institutions.
2. Data do not cover day care centres and integrated centres for early childhood education. Data include subsidies to households and transfers and payments to other non-educational private entities.
3. Year of reference 2021.

Table C2.2. Distribution of expenditure on early childhood educational institutions, by source of expenditure (2022)

1. Total expenditure on educational institutions includes payments of households outside educational institutions.
2. Data do not cover day care centres and integrated centres for early childhood education. Data include subsidies to households and transfers and payments to other non-educational private entities.
3. Year of reference 2021.

Table C2.3. Distribution of expenditure on early childhood education, by type of educational institution (2022)

1. Total expenditure on educational institutions includes payments by households outside educational institutions.
2. Data do not cover day care centres and integrated centres for early childhood education. Data include subsidies to households and transfers and payments to other non-educational private entities.
3. Year of reference 2021.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table C2.1. Total expenditure and government expenditure on early childhood education per child as a percentage of GDP per capita and as a percentage of GDP (2022)

Direct expenditure within institutions

	Expenditure on educational institutions per child (in equivalent USD converted using PPPs for GDP)								Expenditure on educational institutions per child as a percentage of GDP per capita							
	Total (government, private and non-domestic expenditure)				Government expenditure				Total (government, private and non-domestic expenditure)				Government expenditure			
	Early childhood education				Early childhood education				Early childhood education				Early childhood education			
	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	All ECE (ISCED 0)	Age 3 to 5	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	All ECE (ISCED 0)	Age 3 to 5	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	All ECE (ISCED 0)	Age 3 to 5	Early childhood educational development (ISCED 01)	Pre-primary (ISCED 02)	All ECE (ISCED 0)	Age 3 to 5
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	11 707	12 605	12 232	12 887	7 742	8 779	8 348	9 729	17	18	18	19	11	13	12	14
Austria	18 273	13 992	14 823	14 233	14 345	12 307	12 703	12 423	26	20	21	20	20	17	18	18
Belgium	m	12 779	m	m	m	12 480	m	m	m	19	m	m	m	18	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile[1]	8 937[d]	7 863[d]	8 089[d]	8 087[d]	7 570	6 390	6 639	6 424	29[d]	26[d]	27[d]	26[d]	25	21	22	21
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	5 182	5 283	5 280	5 280	m	m	m	m	20	21	21	21
Czechia	a	9 183	9 183	9 183	a	8 318	8 318	8 318	a	18	18	18	a	16	16	16
Denmark	28 217	13 522	18 813	13 642	21 421	10 266	14 282	10 369	36	17	24	18	28	13	18	13
Estonia	x(3)	x(3)	11 931	11 931	x(7)	x(7)	10 618	10 618	x(11)	x(11)	25	25	x(15)	x(15)	22	22
Finland	35 051	16 188	20 022	16 188	33 491	15 208	18 924	15 208	57	26	33	26	55	25	31	25
France	a	11 551	11 551	11 550	a	10 843	10 843	10 842	a	21	21	21	a	19	19	19
Germany	24 546	15 167	17 669	15 165	20 629	13 854	15 661	13 853	36	22	26	22	31	20	23	20
Greece	m	7 949	m	m	m	6 377	m	m	m	21	m	m	m	17	m	m
Hungary	8 508	8 448	8 450	8 448	7 529	7 645	7 640	7 644	19	19	19	19	17	17	17	17
Iceland[1]	33 407[d]	23 432[d]	26 988[d]	23 429	30 844	20 862	24 421	20 861	44[d]	31[d]	36[d]	31	41	27	32	27
Ireland	x(3)	x(3)	m	m	x(7)	x(7)	7 720	m	x(11)	x(11)	m	m	x(15)	x(15)	6	m
Israel	4 377	7 863	6 643	7 870	1 206	7 075	5 021	7 083	8	15	12	15	2	13	9	13
Italy	a	11 969	11 969	12 034	a	9 902	9 902	9 991	a	21	21	21	a	18	18	18
Japan[2]	m	10 180[d]	m	10 180	m	7 956[d]	m	7 956	m	21[d]	m	21	m	17[d]	m	17
Korea	m	15 003	m	15 007	m	13 637	m	13 642	m	27	m	27	m	25	m	25
Latvia	8 406	8 625	8 585	8 625	7 784	8 003	7 964	8 003	21	22	22	22	20	20	20	20
Lithuania	12 031	11 800	11 844	11 800	10 177	10 488	10 428	10 488	24	23	23	23	20	21	21	21
Luxembourg	a	26 726	26 726	26 730	a	25 842	25 842	25 835	a	19	19	19	a	18	18	18
Mexico	1 785	3 447	3 371	3 430	1 610	2 826	2 771	2 825	8	15	14	15	7	12	12	12
Netherlands	a	11 439	11 439	11 439	a	9 868	9 868	9 868	a	15	15	15	a	13	13	13
New Zealand	m	m	m	m	9 754	9 127	9 390	9 187	m	m	m	m	19	17	18	18
Norway	38 835	21 575	27 935	21 575	33 910	18 839	24 392	18 839	51	28	36	28	44	25	32	25
Poland	a	9 913	9 913	9 913	a	8 460	8 460	8 460	a	22	22	22	a	19	19	19
Portugal	m	9 745	m	m	m	6 642	m	m	m	22	m	m	m	15	m	m
Slovak Republic	a	8 821	8 821	8 821	a	7 932	7 932	7 932	a	22	22	22	a	19	19	19
Slovenia	16 464	12 716	13 887	12 717	13 023	10 139	11 040	10 140	32	25	27	25	25	20	22	20
Spain	11 886	10 263	10 711	10 264	8 958	9 011	8 996	9 011	24	20	21	20	18	18	18	18
Sweden	23 242	16 494	18 245	16 494	21 844	15 462	17 119	15 462	35	25	28	25	33	23	26	23
Switzerland	a	m	m	m	a	17 920	17 920	17 937	a	m	m	m	a	20	20	20
Türkiye	m	4 163	m	4 160	m	3 392	m	3 392	m	11	m	11	m	9	m	9
United Kingdom	9 836	7 087	7 615	9 639	2 855	4 984	4 575	7 679	16	12	13	16	5	8	8	13
United States[3]	m	11 367	m	m	m	9 169	m	m	m	17	m	m	m	14	m	m
OECD average	m	11 996	13 498	12 255	m	10 450	11 483	10 816	m	21	22	21	m	18	19	18
Partner and/or accession countries																
Argentina	m	m	m	m	m	4 499	m	m	m	m	m	m	m	15	m	m
Brazil	m	m	m	m	x(7)	x(7)	4 220	4 217	x(11)	x(11)	m	m	x(15)	x(15)	21	21
Bulgaria	a	8 837	8 837	8 837	a	8 750	8 750	8 750	a	25	25	25	a	24	24	24
China	a	2 789	2 789	m	a	1 606	1 606	m	a	12	12	m	a	7	7	m
Croatia	x(3)	x(3)	8 613	8 613	x(7)	x(7)	6 257	6 257	x(11)	x(11)	21	21	x(15)	x(15)	15	15
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	305	2 012	1 916	m	291	1 831	1 744	m	2	12	11	m	2	11	10	m
Romania	13 779	5 760	6 107	5 804	13 608	5 684	6 026	5 727	31	13	14	13	31	13	14	13
Saudi Arabia[3]	m	m	m	m	m	12 297	m	m	m	m	m	m	m	22	m	m
South Africa	m	1 303	m	m	m	1 166	m	m	m	8	m	m	m	8	m	m
EU25 average	m	11 904	12 769	12 021	m	10 613	11 150	10 724	m	21	22	21	m	18	19	19
G20 average	m	8 886	m	m	m	7 494	m	m	m	17	m	m	m	15	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table C2.2. Distribution of expenditure on early childhood educational institutions, by source of expenditure (2022)

In per cent, expenditure within educational institutions, by level of education

	Early childhood educational development (ISCED 01)					Pre-primary (ISCED 02)					All early childhood education (ISCED 0)				
		Private					Private					Private			
	Government	Household	Other private	All private	Non-domestic	Government	Household	Other private	All private	Non-domestic	Government	Household	Other private	All private	Non-domestic
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Australia	66	34	0	34	0	70	30	0	30	0	68	32	0	32	0
Austria	79	13	8	21	a	88	12	0	12	a	86	12	2	14	a
Belgium	m	m	m	m	m	98	2	0	2	0	m	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile[1]	85[d]	15[d]	0[d]	15[d]	a	81[d]	19[d]	0[d]	19[d]	a	82[d]	18[d]	0[d]	18[d]	a
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	a	a	a	a	a	91	6	4	9	0	91	6	4	9	0
Denmark	76	24	0	24	0	76	24	0	24	0	76	24	0	24	0
Estonia	x(11)	x(12)	x(13)	x(14)	x(15)	x(11)	x(12)	x(13)	x(14)	x(15)	89	11	0	11	0
Finland	96	4	0	4	0	94	6	0	6	0	95	5	0	5	0
France	a	a	a	a	a	94	6	0	6	0	94	6	0	6	0
Germany	84	x(4)	x(4)	16	0	91	x(9)	x(9)	9	0	89	x(14)	x(14)	11	0
Greece	m	m	m	m	m	80	11	a	11	9	m	m	m	m	m
Hungary	88	x(4)	x(4)	12	0	90	x(9)	x(9)	10	0	90	x(14)	x(14)	10	0
Iceland[1]	92[d]	6[d]	2[d]	8[d]	0[d]	89[d]	8[d]	3[d]	11[d]	0[d]	90[d]	7[d]	2[d]	10[d]	0[d]
Ireland	x(11)	x(12)	x(13)	x(14)	x(15)	x(11)	x(12)	x(13)	x(14)	x(15)	90	10	a	10	a
Israel	28	57	15	72	a	90	7	3	10	a	76	19	6	24	a
Italy	a	a	a	a	a	83	16	0	16	1	83	16	0	16	1
Japan[2]	m	m	m	m	m	78[d]	6[d]	16[d]	22[d]	0[d]	m	m	m	m	m
Korea	m	m	m	m	m	91	8	2[d]	9[d]	x(8)	m	m	m	m	m
Latvia	93	7	1	7	0	93	7	1	7	0	93	7	1	7	0
Lithuania	85	13	2	15	0	89	10	1	11	0	88	11	1	12	0
Luxembourg	a	a	a	a	a	97	2	0	2	2	97	2	0	2	2
Mexico	90	10	a	10	0	82	18	a	18	0	82	18	a	18	0
Netherlands	a	a	a	a	a	86	14	a	14	0	86	14	a	14	0
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Norway	87	13	0	13	0	87	13	0	13	0	87	13	0	13	0
Poland	a	a	a	a	a	85	14	0	14	0	85	14	0	14	0
Portugal	m	m	m	m	m	68	32	0	32	0	m	m	m	m	m
Slovak Republic	a	a	a	a	a	90	9	1	10	0	90	9	1	10	0
Slovenia	79	21	0	21	0	80	20	0	20	0	80	20	0	20	0
Spain	75	23	1	25	0	88	11	1	12	0	84	15	1	16	0
Sweden	94	6	a	6	a	94	6	a	6	a	94	6	a	6	a
Switzerland	a	a	a	a	a	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	81	11	7	18	1	m	m	m	m	m
United Kingdom	29	67	3	71	0	70	26	4	30	0	60	36	4	40	0
United States[3]	m	m	m	m	m	81	19	a	19	a	m	m	m	m	m
OECD average	m	m	m	m	m	86	13	1	14	0	86	14	1	14	0
Partner and/or accession countries															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	a	a	a	a	a	99	1	0	1	0	99	1	0	1	0
China	a	a	a	a	a	58	39	3	42	a	58	39	3	42	a
Croatia	x(11)	x(12)	x(13)	x(14)	x(14)	x(11)	x(12)	x(13)	x(14)	x(14)	73	19	8	27	x(14)
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	96	4	0	4	x(3)	91	9	0	9	x(7)	91	9	0	9	x(12)
Romania	99	1	0	1	0	99	1	1	1	0	99	1	1	1	0
Saudi Arabia[3]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	86	m	m	14	0	89	10	0	11	1	89	10	1	11	0
G20 average	m	m	m	m	m	80	m	m	20	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table C2.3. Distribution of expenditure on early childhood education, by type of educational institution (2022)

In per cent, direct expenditure within educational institutions, by level of education

	Early childhood educational development (ISCED 01)				Pre-primary (ISCED 02)				All early childhood education (ISCED 0)			
		Private				Private				Private		
	Public	Government-dependent	Independent	All private institutions	Public	Government-dependent	Independent	All private institutions	Public	Government-dependent	Independent	All private institutions
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	a	m	m	m	a	m	m	m	a	m
Austria	44	x(4)	x(4)	56	72	x(8)	x(8)	28	65	x(12)	x(12)	35
Belgium	m	m	m	m	54	46	0	46	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile[1]	82[d]	3[d]	15[d]	18[d]	46[d]	39[d]	15[d]	54[d]	54[d]	31[d]	15[d]	46[d]
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	a	a	a	a	96	4	a	4	96	4	a	4
Denmark	78	22	a	22	78	22	a	22	78	22	a	22
Estonia	x(9)	x(10)	x(11)	x(12)	x(9)	x(10)	x(11)	x(12)	95	5	0	5
Finland	m	m	m	m	m	m	m	m	m	m	m	m
France	a	a	a	a	m	m	m	m	m	m	m	m
Germany	33	x(4)	x(4)	67	43	x(8)	x(8)	57	40	x(12)	x(12)	60
Greece	m	m	m	m	89	a	11	11	m	m	m	m
Hungary	75	x(4)	x(4)	25	83	x(8)	x(8)	17	83	x(12)	x(12)	17
Iceland[1]	86[d]	14[d]	a	14[d]	86[d]	14[d]	a	14[d]	86[d]	14[d]	a	14[d]
Ireland	x(9)	x(10)	x(11)	x(12)	x(9)	x(10)	x(11)	x(12)	1	99	a	99
Israel	a	30	70	100	81	9	10	19	62	14	24	38
Italy	a	a	a	a	88	a	12	12	88	a	12	12
Japan[2]	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	a	m	61	39	a	39	m	m	a	m
Latvia	88	a	12	12	88	a	12	12	88	a	12	12
Lithuania	82	a	18	18	91	a	9	9	90	a	10	10
Luxembourg	a	a	a	a	95	a	5	5	95	a	5	5
Mexico	92	a	8	8	85	a	15	15	85	a	15	15
Netherlands	a	a	a	a	25	60	15	75	25	60	15	75
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m
Norway	56	44	a	44	56	44	a	44	56	44	a	44
Poland	a	a	a	a	69	x(8)	x(8)	31	69	x(12)	x(12)	31
Portugal	m	m	m	m	59	28	13	41	m	m	m	m
Slovak Republic	a	a	a	a	93	7	a	7	93	7	a	7
Slovenia	95	5	a	5	96	4	a	4	96	4	a	4
Spain	72	x(4)	x(4)	28	76	x(8)	x(8)	24	75	x(12)	x(12)	25
Sweden	81	19	a	19	81	19	a	19	81	19	a	19
Switzerland	a	a	a	a	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	79	a	21	21	m	m	m	m
United Kingdom	15	82	4	85	44	52	4	56	36	59	4	64
United States[3]	m	m	m	m	73	a	27	27	m	m	m	m
OECD average	m	m	m	m	74	m	m	26	71	m	m	29
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	a	a	a	a	99	a	1	1	99	a	1	1
China	a	a	a	a	67	x(8)	x(8)	33	67	x(12)	x(12)	33
Croatia	x(9)	a	x(11)	x(12)	x(9)	a	x(11)	x(12)	83	a	17	17
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	99	a	1	1	93	a	7	7	93	a	7	7
Saudi Arabia[3]	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	75	m	m	25	78	13	6	22	77	15	5	23
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter C3. How are primary and lower secondary education financed?

Highlights

- On average across OECD countries, government expenditure per student is similar in primary education (USD 12 051) and lower secondary education (USD 13 402), with greater differences between countries than between education levels.
- There are striking disparities across countries in annual spending per student by governments at primary and lower secondary level: from under USD 3 000 in Mexico and Peru to over USD 25 000 in Luxembourg, highlighting significant differences in national income levels and capacity to invest in education.
- Although richer countries like Luxembourg have the highest government spending per primary and lower secondary student, their spending as a share of GDP tends to fall below the OECD average. In contrast, OECD and partner countries with lower GDP such as Costa Rica and South Africa dedicate a higher share of national income to primary and lower secondary education.

Context

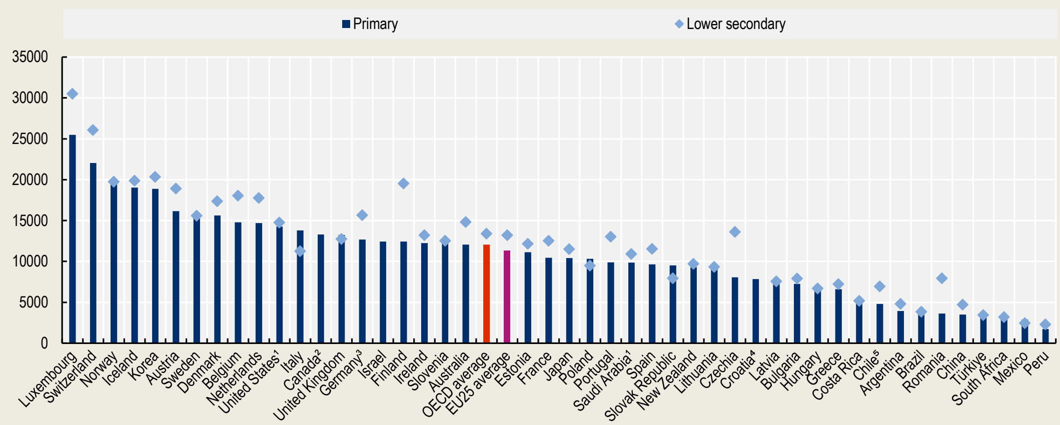
In all OECD and partner countries, education at the primary and lower secondary levels is compulsory (see Chapter B2). As a result, policies, funding mechanisms and institutional arrangements frequently apply to both levels as a unified stage of education. In many OECD countries, primary and lower secondary education are provided within the same structure, often referred to as basic education, reinforcing this integrated approach.

Moreover, lower secondary education (ISCED 2) is still largely offered as a general programme for all students in most countries, without a formal division between general and vocational tracks. Since programme orientation becomes more relevant and widespread at the upper secondary level (ISCED 3), issues related to this differentiation are addressed separately in Chapter C4.

This chapter focuses on how education systems build on early childhood education to establish strong foundations in primary and lower secondary schooling. It examines how funding patterns are changing over time and how resources are allocated between the two levels.

Figure C3.1. Government expenditure per student in primary and lower secondary education (2022)

In equivalent USD converted using PPPs, based on full-time equivalent students, direct expenditure on educational institutions



1. Year of reference differs from 2022.
2. Primary includes pre-primary and lower secondary education.
3. Lower secondary education covers only general programmes.
4. Primary includes lower secondary education.
5. Total expenditure on educational institutions includes payments by households outside educational institutions.

For data, see Table C3.1. For a link to download the data, see Tables and Notes section.

Other findings

- Most countries have increased expenditure per student in recent years, often due to falling enrolments while increasing the level of investment in education. The sharpest increases between 2015 and 2022 were in Bulgaria (67%) and Korea (63%), while Latvia, Mexico and the Republic of Türkiye reported declines in expenditure per student.
- On average across OECD countries, spending per lower secondary student is slightly higher in public schools than in private ones, but this varies by country. For example, private schools in Denmark, Greece, Poland and Türkiye significantly outspend public schools, while the differences are minimal in the Netherlands and the Slovak Republic, where the private educational institutions are exclusively or largely government dependent.

Analysis

In most OECD and partner countries, annual government expenditure per full-time equivalent student is relatively similar at primary and lower secondary level. Governments spend on average USD 12 051 per student at primary level, compared to about USD 13 402 at lower secondary level across OECD countries (Figure C3.1). The largest variation is not between levels but between countries. For example, in Mexico and Peru, governments spend less than USD 3 000 per student at both levels. This contrasts sharply with Luxembourg, where expenditure reaches USD 25 482 per primary student and USD 30 498 per student at the lower secondary level – ten times the amount in the countries with the lowest expenditure per student.

Only a small number of countries exhibit significant differences in government spending per student between primary and lower secondary education (Figure C3.1). Czechia and Finland are the countries with the greatest differences in absolute terms even though primary and lower secondary education is organised within a single-structure system in nine-year basic school. In primary education, instruction is more class-teacher oriented, especially in lower grades, and more subject-teacher oriented in lower secondary education. Although teacher salaries are not significantly higher in lower secondary education compared to primary education, longer student instruction time (see Chapter D4), lower ratio of students to teaching staff (see Chapter D2), and higher teacher salary cost (see Chapter D4) in lower secondary education than in primary education partly explains the higher cost at lower secondary level.

The largest relative difference is observed in Romania where the government spends USD 3 629 per student at primary level per year, but over twice as much (USD 7 941) at lower secondary level (Figure C3.1). As with Czechia and Finland, teachers' salaries and class sizes are similar between primary and lower secondary education, but the longer instruction time for students in lower secondary education (1 001 hours per year) compared to primary education (720 hours per year) partly explains the higher cost at lower secondary education level (see Chapter D4).

Government expenditure on primary and lower secondary educational institutions as a percentage of GDP

Expenditure per student in primary and lower secondary education is highest in Luxembourg and Switzerland (Figure C3.1), but these two countries also have among the highest GDP per capita across OECD countries. When looking at government education expenditure as a percentage of GDP, the order of countries changes drastically (Figure C3.1 and Figure C3.2). In particular, Luxembourg falls from the highest to below the OECD average. Meanwhile, some OECD and partner countries with lower GDP invest a large share of their income in education at primary and lower secondary level. For example, Brazil, Costa Rica and South Africa all move from being in the bottom ten when considering expenditure per student, to the top ten when considering expenditure as a share of GDP.

Differences in government expenditure on primary and lower secondary educational institutions as a percentage of GDP highlight differences in public investment in foundational education, which can have long-term implications for educational quality, equity and outcomes. Iceland dedicates the highest share among OECD and partner countries, spending 3.2% of its GDP on this sector. In contrast, government expenditure on primary and lower secondary in Hungary, Romania and Türkiye represents just over 1.0% of GDP, well below the OECD average of 2.2%. Some countries with a high GDP such as Germany, Italy and Japan also fall below the OECD average, indicating that higher national income does not necessarily correlate with higher spending on education (Figure C3.2).

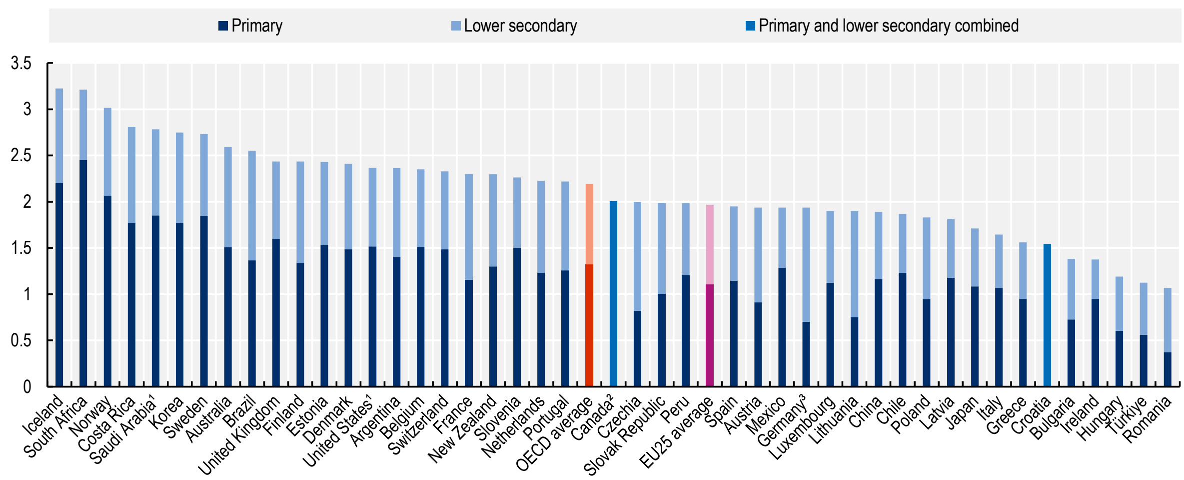
On average across OECD countries, government expenditure on primary education amounts to 1.3% of GPD, compared to 0.9% of GDP on lower secondary education. This is strongly influenced by two factors: the length of primary and lower secondary programmes, and the size of the population of children at each level. Countries with a classic wide-based age pyramid and a longer duration of primary education will naturally spend more on primary education relative to GDP. For example, South Africa has a relatively young population and primary education lasts seven years, longer than in most OECD and partner countries. This partly explains why the government in South Africa spends 2.4% of GDP on primary education and only 0.8% on lower secondary education (Figure C3.2).

In contrast, primary education lasts only four years in Austria, Bulgaria, Croatia, Germany, Hungary, Lithuania, Poland, the Slovak Republic and Türkiye, and governments in many of these countries spend less on primary education than on lower secondary education. For example, in Germany, government expenditure on primary education represents 0.7% of GDP, compared to 1.2% for lower secondary education. This is also because Germany has the longest duration of lower secondary education across OECD countries (Figure C3.2).

The length of programmes and the population dynamics are not the only drivers of government investment in primary and lower secondary education. For example, in Romania, primary education lasts five years and lower secondary education lasts four years, but despite the longer duration of primary education, the government invests much more in lower secondary than in primary education. Romania stands out as the country with the lowest percentage of government expenditure on primary education as a percentage of GDP, at 0.4% compared to the OECD average of 1.3% (Figure C3.2).

Figure C3.2. Government expenditure on primary and lower secondary educational institutions as a percentage of GDP (2022)

In per cent, expenditure on educational institutions



1. Year of reference differs from 2022.
2. Includes pre-primary education.
3. Lower secondary education covers only general programmes.

For data, see Table C3.1. For a link to download the data, see Tables and Notes section.

Expenditure per student, by type of institution

Expenditure per student can vary considerably depending on the type of institution. Public schools are typically funded and regulated by government authorities. Private schools, defined as being under the control of a private entity regardless of their funding sources, fall into two categories. Government-dependent private institutions, which receive more than half of their funding from public sources, and independent private institutions, which typically rely on private funding such as tuition fees and donations and, in some cases, public subsidies.

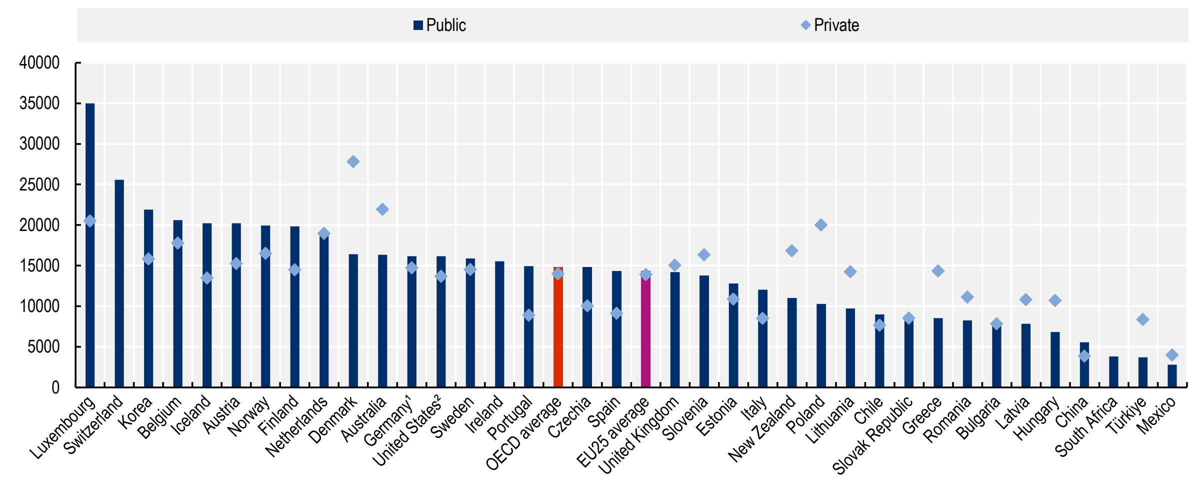
Figure C3.3 portrays the overall differences in total expenditure per student between public and private lower secondary institutions, without distinguishing between independent and government-dependent private schools. On average across OECD countries, expenditure per student in public lower secondary institutions (USD 14 806 per student) is slightly higher than in private institutions (USD 13 986 per student). This may reflect the fact that public schools typically offer more stable employment and centrally negotiated salary scales. This often results in higher average teacher salaries and more generous benefits compared to private schools, especially independent ones that may hire younger or less experienced staff.

In countries where private provision is mostly or exclusively government dependent – such as the Netherlands and the Slovak Republic – the differences in spending per student between public and private institutions at lower secondary level are minimal. In contrast, in systems where private education is largely independent, such as in Luxembourg, there can be much larger differences in spending per student between the private and public sector (Figure C3.3).

While most countries follow a similar pattern to the OECD average, there are some notable exceptions. For example, in Denmark, expenditure per student in public institutions is USD 16 409 while it reaches USD 27 828 in private ones. In Denmark, boarding schools are considered government-dependent private and are a common choice in the transition between levels of education. Similar differences in favour of lower secondary private institutions can be found in Greece, Poland and Türkiye (Figure C3.3).

Figure C3.3. Total expenditure per student in lower secondary education, by type of institution (2022)

In equivalent USD converted using PPPs, based on full-time equivalent students, direct expenditure on educational institutions



1. Lower secondary education covers only general programmes.
2. Year of reference differs from 2022.
For data, see Table C3.1. For a link to download the data, see Tables and Notes section.

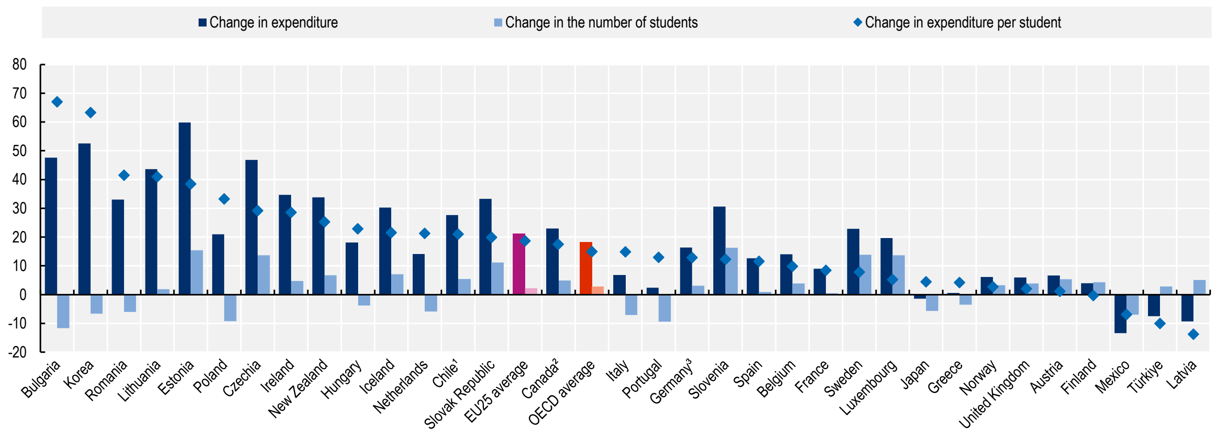
Trends in expenditure on primary and lower secondary education

Between 2015 and 2022, most OECD and partner countries experienced an increase in expenditure per student in primary and lower secondary educational institutions (Figure C3.4). These changes reflect a combination of shifts in expenditure on education and demographic trends affecting student enrolment. While most countries increased their investment per student, the scale of these changes varied widely, depending on national economic conditions, demographic trends and policy priorities. Some countries faced shrinking student populations and were able to boost expenditure per student by investing further in their education budgets, whereas others needed to substantially increase total expenditure to keep pace with growing enrolment and maintain quality standards. Increased spending per student does not necessarily translate to better quality of education as it may reflect factors like the greater cost of operating small schools in rural areas.

Bulgaria recorded the largest increase in expenditure per student across reporting countries (67%) and the largest drop in student numbers (-12%) between 2015 and 2022. A similar pattern was observed in Korea, where spending per student rose by 63% while enrolment declined by 7%. Estonia managed to boost spending per student by 38% despite a 15% increase in student numbers, requiring a total expenditure increase of 60% over the period. Czechia and Lithuania followed similar trends, with spending per student increasing, while enrolment also grew. Finally, Türkiye (-10%) and Latvia (-14%) reported notable reductions in expenditure per student, influenced by declining spending (in constant prices) and rising enrolment (Figure C3.4).

Figure C3.4. Change in expenditure per student in primary and lower secondary educational institutions (2015 to 2022)

In per cent, based on full-time equivalent students, constant prices (2020=100)



1. Includes payments by households outside educational institutions.
2. Primary includes pre-primary education.
3. Lower secondary education covers only general programmes.
For data, see Table C3.3. For a link to download the data, see Tables and Notes section.

Definitions

For the definitions of direct government expenditure on educational institutions, and direct private expenditure on educational institutions, refer to Chapter C1.

For the definition of public and private educational institutions, refer to Chapter C2.

Methodology

For an overview of the methodology, see Chapter C1. For more detailed information, please refer to the OECD Handbook for Internationally Comparative Education Statistics (OECD, 2018[1]). For country-specific notes, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (*https://doi.org/10.1787/fcfaf2d1-en*).

Adult education can be offered at the primary and secondary levels, and as such, the data may include related expenditure for adult learners as well as for students with special educational needs.

Source

For the data sources used in this Chapter, refer to Chapter C1. For additional details, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes*).

References

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264304444-en. [1]

Tables and Notes

Chapter C3 Tables

StatLink https://stat.link/5e4rya

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data..

Notes for Tables

Table C3.1. Expenditure on primary and lower secondary educational institutions (2022)

Note: Columns showing data on expenditure per student as a percentage of GDP per capita and on expenditure on educational institutions as a percentage of GDP are available for consultation on line.

1. Primary includes pre-primary and lower secondary education.
2. Total expenditure on educational institutions includes payments by households outside educational institutions.
3. Lower secondary education covers only general programmes.
4. Data include government transfers and payments to households (scholarship and loans) and to other non-educational private entities.
5. Year of reference 2021.

Table C3.2. Distribution of expenditure on primary and lower secondary educational institutions, by source of funds (2022)

1. Primary includes pre-primary and lower secondary education.
2. Total expenditure on educational institutions includes payments by households outside educational institutions.
3. Lower secondary education covers only general programmes.
4. Data include government transfers and payments to households (scholarship and loans) and to other non-educational private entities.
5. Year of reference 2021.

Table C3.3. Change in expenditure on primary and lower secondary education (2015 to 2022)

Note: Columns showing the data used to calculate changes between 2015 and 2022 are available for consultation on line.

1. Primary includes pre-primary and lower secondary education.
2. Total expenditure on educational institutions for 2022 includes payments by households outside educational institutions.
3. Lower secondary education covers only general programmes.
4. Data include government transfers and payments to households (scholarship and loans) and to other non-educational private entities.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader’s Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)].

Table C3.1. Expenditure on primary and lower secondary educational institutions (2022)

Direct expenditure within educational institutions, by level of education

	Expenditure on educational institutions per student (in equivalent USD converted using PPPs for GDP)											
	Total (government, private and non-domestic expenditure)						Government expenditure					
	Primary			Lower secondary			Primary			Lower secondary		
	Public and private institutions	Public institutions	Private institutions	Public and private institutions	Public institutions	Private institutions	Public and private institutions	Public institutions	Private institutions	Public and private institutions	Public institutions	Private institutions
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	13 610	13 181	14 570	18 644	16 338	21 928	12 075	12 850	10 339	14 826	15 813	13 422
Austria	16 897	17 039	14 730	19 691	20 207	15 265	16 166	16 702	8 006	18 920	19 869	10 789
Belgium	15 350	18 150	12 947	18 849	20 609	17 764	14 798	17 598	12 395	18 041	19 998	16 835
Canada[1]	14 606[d]	14 832[d]	11 785[d]	x(1)	x(2)	x(3)	13 312[d]	14 131[d]	3 123[d]	x(7)	x(8)	x(9)
Chile[2]	6 199[d]	6 747[d]	5 877[d]	8 185[d]	8 990[d]	7 649[d]	4 816	6 747	3 679	6 954	8 990	5 598
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	5 272	5 329	100	5 182	5 326	158
Czechia	8 637	8 706	6 918	14 601	14 800	10 028	8 052	8 277	2 455	13 625	14 058	3 721
Denmark	16 411	16 524	15 902	19 910	16 409	27 828	15 630	16 274	12 723	17 369	16 161	20 101
Estonia	11 709	11 807	10 481	12 698	12 816	10 876	11 144	11 547	6 068	12 159	12 542	6 258
Finland	12 426	12 415	13 067	19 542	19 847	14 497	12 421	12 409	13 055	19 533	19 838	14 483
France	11 135	m	m	13 622	m	m	10 444	m	m	12 511	m	m
Germany[3]	13 007	12 896	14 935	16 004	16 163	14 722	12 694	12 588	14 521	15 666	15 820	14 426
Greece	8 011	7 894	9 550	8 866	8 522	14 329	6 604	7 097	83	7 219	7 668	107
Hungary	7 689	6 909	10 693	7 662	6 817	10 693	6 752	6 570	7 453	6 692	6 479	7 453
Iceland[2]	19 211[d]	19 521	10 292	20 067[d]	20 234	13 480	19 040	19 349[d]	10 135	19 887	20 055[d]	13 256
Ireland	12 357	12 430	5 313	15 525	15 525	a	12 249	12 375	a	13 222	13 222	a
Israel	13 003	15 474	5 243	m	m	m	12 430	15 119	3 986	m	m	m
Italy	14 959	15 542	6 237	11 897	12 042	8 481	13 801	14 622	1 523	11 259	11 674	1 476
Japan[4]	10 570[d]	x(1)	x(1)	12 259[d]	x(4)	x(4)	10 429[d]	x(7)	x(7)	11 514[d]	x(10)	x(10)
Korea	19 749	19 856	13 277	20 907	21 910	15 824	18 884	19 149	2 842	20 327	21 349	15 152
Latvia	7 757	7 693	9 381	7 958	7 847	10 789	7 390	7 547	3 410	7 553	7 696	3 922
Lithuania	9 738	9 445	14 256	9 966	9 704	14 223	9 127	9 272	6 885	9 340	9 492	6 862
Luxembourg	26 975	27 955	19 005	32 176	34 996	20 489	25 482	27 955	5 375	30 498	34 996	11 851
Mexico	3 391	3 252	4 744	2 901	2 789	3 980	2 877	3 172	8	2 442	2 696	2
Netherlands	14 910	14 886	14 920	18 930	18 880	18 947	14 703	14 749	14 683	17 775	18 184	17 634
New Zealand	9 997	9 921	13 406	11 323	11 030	16 826	9 297	9 476	1 205	9 705	10 158	1 209
Norway	19 752	19 512	26 116	19 752	19 950	16 519	19 752	19 512	26 116	19 752	19 950	16 519
Poland	11 935	11 189	20 999	10 977	10 293	20 003	10 331	10 429	9 145	9 489	9 512	9 186
Portugal	11 047	11 503	8 019	14 179	14 929	8 876	9 874	11 169	1 268	13 028	14 596	1 945
Slovak Republic	10 282	10 202	11 097	8 528	8 528	8 523	9 504	9 457	9 983	7 928	7 977	7 439
Slovenia	13 390	13 377	14 613	13 765	13 741	16 350	12 202	12 224	10 140	12 527	12 538	11 271
Spain	10 954	12 147	8 398	12 660	14 324	9 120	9 634	11 665	5 283	11 538	14 041	6 212
Sweden	15 775	15 965	14 509	15 616	15 888	14 503	15 759	15 965	14 383	15 591	15 888	14 377
Switzerland	m	21 230	m	m	25 582	m	22 041	21 230	35 893	26 060	25 582	31 133
Türkiye	3 914	3 598	8 807	4 025	3 714	8 356	3 386	3 475	2 011	3 455	3 609	1 317
United Kingdom	14 914	15 026	14 730	14 788	14 214	15 024	13 249	14 201	11 668	12 736	13 631	12 369
United States[5]	15 270	15 704	11 092	15 934	16 160	13 687	14 274	15 603	1 458	14 753	16 057	1 798
OECD average	12 730	13 310	11 997	14 315	14 806	13 986	12 051	12 738	7 982	13 402	14 105	9 321
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	3 948	4 758	1 560	4 813	5 528	2 556
Brazil	m	m	m	m	m	m	3 735	4 573	a	3 857	4 512	a
Bulgaria	7 313	7 370	4 685	8 044	8 049	7 827	7 241	7 368	1 291	7 897	8 044	1 306
China	3 835	3 897	3 200	5 303	5 546	3 849	3 502	3 801	418	4 709	5 424	439
Croatia	8 265[d]	8 292[d]	6 682[d]	x(1)	x(2)	x(3)	7 838[d]	7 920[d]	2 880[d]	x(7)	x(8)	x(9)
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	1 980	x(1)	x(1)	2 775	x(4)	x(4)	1 724	x(7)	x(7)	2 301	x(10)	x(10)
Romania	3 758	3 692	6 937	8 291	8 255	11 127	3 629	3 571	6 384	7 941	7 903	10 992
Saudi Arabia[5]	m	m	m	m	m	m	9 845	11 452	34	10 925	12 333	47
South Africa	3 297	3 500	m	3 615	3 799	m	2 956	3 137	m	3 185	3 348	m
EU25 average	12 028	12 251	11 428	14 165	14 313	13 875	11 339	11 890	7 365	13 222	13 835	9 029
G20 average	10 943	m	m	11 658	m	m	9 338	9 822	4 125	9 799	10 138	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table C3.2. Distribution of expenditure on primary and lower secondary educational institutions, by source of funds (2022)

Final source (after transfers), in per cent, direct expenditure within educational institutions, by level of education

	Primary					Lower secondary				
		Private					Private			
	Government	Household	Other private	All private	Non-domestic	Government	Household	Other private	All private	Non-domestic
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	89	x(4)	x(4)	11	0	80	x(9)	x(9)	20	0
Austria	96	4	1	4	a	96	4	0	4	a
Belgium	96	3	0	3	1	96	4	0	4	1
Canada[1]	91[d]	4[d]	5[d]	9[d]	x(3)	x(1)	x(2)	x(3)	x(4)	x(8)
Chile[2]	78[d]	22[d]	0[d]	22[d]	a	85[d]	15[d]	0[d]	15[d]	a
Colombia	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m
Czechia	93	3	3	7	0	93	4	3	7	0
Denmark	95	3	2	5	0	87	11	2	13	0
Estonia	95	4	1	5	0	96	3	1	4	0
Finland	100	0	0	0	0	100	0	0	0	0
France	94	6	0	6	0	92	8	0	8	0
Germany[3]	98	x(4)	x(4)	2	0	98	x(9)	x(9)	2	0
Greece	82	8	a	8	9	81	10	a	10	9
Hungary	88	x(4)	x(4)	12	0	87	x(9)	x(9)	13	0
Iceland[2]	99[d]	1[d]	0[d]	1[d]	0[d]	99[d]	1[d]	0[d]	1[d]	0[d]
Ireland	99	x(4)	x(4)	1	a	85	x(9)	x(9)	15	a
Israel	96	4	1	4	a	m	m	m	m	m
Italy	92	7	0	7	1	95	4	0	4	1
Japan[4]	99[d]	1[d]	0[d]	1[d]	0[d]	94[d]	5[d]	1[d]	6[d]	0[d]
Korea	96	3	1[d]	4[d]	x(3)	97	1	2[d]	3[d]	x(8)
Latvia	95	4	1	4	0	95	4	1	5	0
Lithuania	94	5	1	6	0	94	5	2	6	0
Luxembourg	94	3	0	3	3	95	2	0	3	3
Mexico	85	15	a	15	0	84	16	a	16	0
Netherlands	99	1	a	1	0	94	5	1	6	0
New Zealand	93	4	3	7	0	86	9	5	14	0
Norway	100	0	0	0	0	100	0	0	0	0
Poland	87	11	1	12	1	86	12	0	12	2
Portugal	89	11	0	11	0	92	8	0	8	0
Slovak Republic	92	5	2	7	0	93	4	3	7	0
Slovenia	91	8	0	9	0	91	8	0	9	0
Spain	88	11	1	12	0	91	8	1	9	0
Sweden	100	0	a	0	a	100	0	a	0	a
Switzerland	m	m	m	m	m	m	m	m	m	m
Türkiye	86	8	5	13	1	86	10	4	14	1
United Kingdom	89	6	5	11	0	86	8	6	14	0
United States[5]	93	7	a	7	a	93	7	a	7	a
OECD average	93	6	1	7	1	92	6	1	8	1
Partner and/or accession countries										
Argentina	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m
Bulgaria	99	1	0	1	0	98	2	0	2	0
China	91	6	3	9	a	89	9	3	11	a
Croatia	95[d]	4[d]	1[d]	5[d]	a	x(1)	x(2)	x(3)	x(4)	a
India	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m
Peru	87	13	0	13	a	83	17	0	17	a
Romania	97	0	1	1	2	96	0	0	1	4
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m
EU25 average	94	5	1	5	1	93	5	1	6	1
G20 average	92	m	m	8	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Table C3.3. Change in expenditure on primary and lower secondary education (2015 to 2022)

Direct expenditure within educational institutions, constant prices (2020=100)

	Primary			Lower secondary			Primary and lower secondary combined		
	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Australia	m	m	m	m	m	m	m	m	m
Austria	9	7	17	-4	4	-1	1	5	7
Belgium	11	4	15	7	4	12	10	4	14
Canada[1]	17[d]	5[d]	23[d]	x(1)	x(2)	x(3)	17	5	23
Chile[2]	14	5	20	38	8	48	21	5	28
Colombia	m	m	m	m	m	m	m	m	m
Costa Rica	m	-7	m	m	-9	m	m	-8	m
Czechia	25	4	30	26	28	62	29	14	47
Denmark	m	m	m	m	m	m	m	m	m
Estonia	36	10	50	42	27	80	38	15	60
Finland	-1	3	2	-1	8	7	0	4	4
France	15	-1	14	2	3	5	8	0	9
Germany[3]	14	8	23	13	0	13	13	3	16
Greece	8	-9	-2	-3	8	6	4	-4	1
Hungary	19	-4	14	28	-4	23	23	-4	18
Iceland[2]	25	4	30	14	15	31	22	7	30
Ireland	34	0	33	15	m	m	29	5	35
Israel	30	15	50	m	m	m	m	m	m
Italy	30	-9	18	-6	-4	-10	15	-7	7
Japan[4]	4[d]	-5	-1[d]	5[d]	-7	-2[d]	4[d]	-6	-1[d]
Korea	60	-2	57	70	-15	45	63	-7	53
Latvia	-14	1	-13	-13	14	-1	-14	5	-9
Lithuania	33	8	44	46	-2	43	41	2	44
Luxembourg	-1	15	14	17	11	29	5	14	20
Mexico	-6	-6	-12	-8	-8	-16	-7	-7	-13
Netherlands	31	-5	24	13	-7	4	21	-6	14
New Zealand	25	2	27	25	14	43	25	7	34
Norway	6	1	7	-3	8	4	3	3	6
Poland	40	-34	-8	25	45	81	33	-9	21
Portugal	14	-9	3	12	-10	1	13	-9	2
Slovak Republic	26	7	34	15	15	32	20	11	33
Slovenia	17	14	33	3	22	26	12	16	31
Spain	13	-3	9	9	9	18	12	1	13
Sweden	10	11	21	4	21	26	8	14	23
Switzerland	m	8	m	m	7	m	m	8	m
Türkiye	-15	2	-13	-5	4	-1	-10	3	-7
United Kingdom	-2	4	2	10	4	14	2	4	6
United States	m	m	m	m	m	m	m	m	m
OECD average	16	1	18	13	7	21	15	3	18
Partner and/or accession countries									
Argentina	m	0	m	m	-2	m	m	-1	m
Brazil	m	m	m	m	m	m	m	m	m
Bulgaria	78	-11	58	57	-12	37	67	-12	48
China	m	13	m	m	13	m	m	13	m
Croatia	m	-3	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m
Peru	m	9	m	m	9	m	m	9	m
Romania	27	-7	18	49	-4	43	42	-6	33
Saudi Arabia	m	m	m	m	m	m	m	m	m
South Africa	m	1	m	m	8	m	m	3	m
EU25 average	21	0	20	15	8	24	19	2	21
G20 average	m	1	m	m	m	m	m	0	m

Note: For notes on this table and a link to download the data, see *Tables and Notes* section above.

Chapter C4. How are upper secondary and post-secondary non-tertiary education financed?

Highlights

- In most countries, government expenditure per student on upper secondary vocational programmes is higher than on general ones, with the average across OECD countries amounting to USD 12 826 per student for vocational programmes and USD 11 506 for general programmes. The difference in expenditure between the two types of programmes is largest in Denmark, Iceland and Spain.
- Around one-quarter of expenditure or more on general upper secondary education programmes comes from private sources in Chile (24%), the Republic of Türkiye (33%) and the United Kingdom (25%), the largest share among OECD countries. In contrast, in Finland and Norway expenditure from private sources on these programmes is negligible.
- In countries that make extensive use of apprenticeships in upper secondary education, relatively high shares of private expenditure reflect the role of companies in providing work-based learning. In Germany, private sources after public-private transfers account for 38% of expenditure on upper secondary vocational programmes. In Switzerland, the share of private sources is 31% for all upper secondary programmes (both before and after transfers).

Context

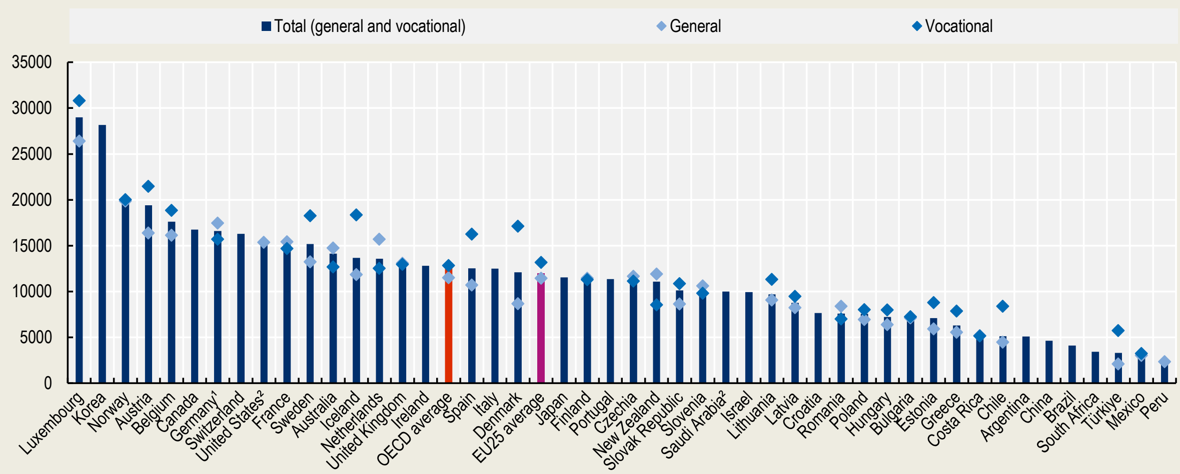
Upper secondary education is the stage where many countries start diversifying provision, so that students may choose between different programmes or be guided to specific options. The diversity of provision means that the associated costs and funding arrangements will also vary not only between countries but also within countries depending on the type of programme.

General upper secondary programmes play a key role in preparing young people for further studies, often at tertiary level, and to a lesser extent for entry into the labour market. Within general programmes, students often have the option to study specific areas in more depth. In addition, most OECD countries have one or more vocational tracks at this level. The costs of delivering these programmes will vary, depending on their duration and forms of delivery (e.g. ranging from fully school-based programmes to apprenticeships where young people spend most of their time in a workplace). In a few OECD countries there is no distinct vocational track in initial upper secondary education or it is very small (e.g. in Canada except for the province of Québec, New Zealand and the United States). In these countries post-secondary non-tertiary and short-cycle tertiary programmes play a key role in preparing young people for the labour market.

This chapter looks at funding arrangements that underpin upper secondary education, focusing mostly on differences between general and vocational programmes. It also looks at post-secondary programmes, but with less detail given the relatively small size of this level of education on average across OECD countries.

Figure C4.1. Government expenditure per full-time equivalent student in upper secondary education, by programme orientation (2022)

In equivalent USD converted using PPPs, expenditure on educational institutions



1. Upper secondary (vocational) includes lower secondary vocational programmes.

2. Year of reference differs from 2022.

For data, see Table C4.1. For a link to download the data, see Tables and Notes section.

Other findings

- The role of private sources in funding upper secondary education varies greatly. Some upper secondary institutions are fully government funded (e.g. Finland, Norway, Romania and Sweden). In contrast, private sources account for at least 15% of expenditure on upper secondary institutions in ten countries.
- OECD countries spend the equivalent of 24% of GDP per capita on each student in upper secondary education. Expenditure per upper secondary student exceeds 30% of GDP per capita in France, Germany, Korea and Portugal.
- On average across OECD countries, a similar share of GDP is allocated by governments to general upper secondary programmes as to vocational ones (0.4% each).
- Differences in investment in vocational upper secondary and post-secondary non-tertiary education reflect differences in how countries use these programmes to prepare young people for labour-market entry. For example, some countries have relatively high public investment in post-secondary non-tertiary programmes (e.g. 0.19% of GDP in New Zealand, 0.07% in Australia and Lithuania), while some OECD countries offer no programmes at this level.

Analysis

Figure C4.1 shows government expenditure per student in upper secondary education for general and vocational programmes, as well as both combined. It provides data on expenditure after public-private transfers –meaning that expenditure like government subsidies to companies to provide apprenticeships would be accounted for under private expenditure (see below). On average, OECD countries spend about USD 13 000 per student at this level, but the range is wide: from almost USD 30 000 in Luxembourg to slightly over USD 3 000 in Mexico and Türkiye.

In most countries, government spending per student in vocational programmes exceeds that in general programmes. The difference is highest in Austria, Denmark, Iceland and Spain. Higher costs in vocational programmes might be driven by various factors. Some vocational programmes require schools to purchase technical equipment and keep it up to date, which can be costly, particularly in fields that make extensive use of advanced technologies. This creates extra costs, especially in programmes where most of the practical training is delivered in school workshops. On average across OECD countries less than half of upper secondary vocational education and training (VET) students are enrolled in programmes where 10% or more of the time is spent learning in the workplace but this share varies across countries; for example, while all VET students in Denmark pursue combined school- and work-based programmes, only half do so in Austria. However, the location of practical training is not the only factor behind higher costs in vocational programmes; another driver is that some courses require smaller class sizes – practical training in a school workshop for would-be electricians requires smaller groups than a theory-focused biology lesson. The distribution of enrolment by fields of study also influences average costs in different countries. In countries where vocational provision includes a larger share of enrolment in fields like construction and manufacturing, the costs of providing VET will be higher than in countries with vocational programmes more heavily oriented towards service sectors.

Private sources in general and vocational upper secondary programmes

Education programmes may be financed by different stakeholders, in addition to governments. For example, families may pay tuition fees, while foundations may provide funding for schools. In the case of vocational programmes in particular, companies can play an important role. When they provide work-based learning as part of a formal education programme (e.g. apprenticeships or internships for VET students), they contribute to the cost of upper secondary provision. Figure C4.2 shows the share of expenditure on upper secondary institutions that comes from private sources: households and other private entities, which covers companies and non-profit organisations such as foundations. One caveat about the data on vocational programmes is that many countries lack data on the expenditure by companies in the context of apprenticeships and other combined school- and work-based programmes. In such cases private expenditure will be underestimated.

An important distinction needs to be made between initial funds (expenditure before transfers from the public to the private sector) and final funds (after transfers). For example, several countries provide a government subsidy to companies that provide apprenticeships. The amount of the subsidy will be included in government expenditure in the case of expenditure before public-private transfers, but will fall under private expenditure after public-private transfers. Data on expenditure before public-private transfers indicate where funding comes from, while data after public-private transfers show which stakeholder is ultimately doing the spending.

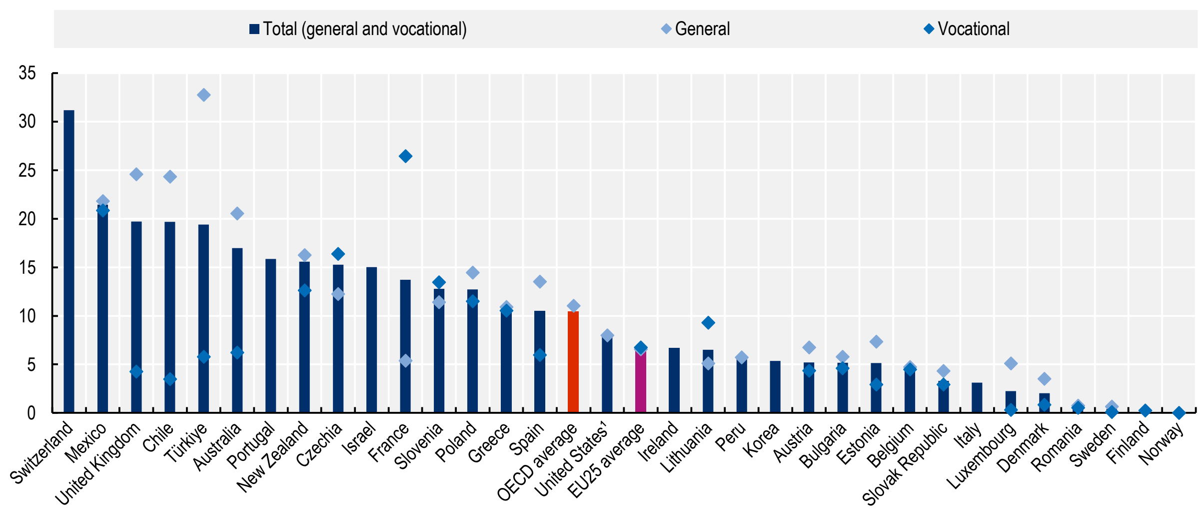
Table C4.1 shows the distribution of spending on upper secondary education both before and after public-private transfers, while Figure C4.2 is based on initial expenditure data, before such transfers. This explains why Norway, which has a strong apprenticeship system, reports all expenditure as public. In Norway, apprenticeships are the main form of vocational upper secondary provision with students spending two years in school and two years in a company. Companies that host apprentices receive a subsidy equivalent to the cost of one year of school-based education, designed to offset the costs for companies.

The role of private sources in funding upper secondary education varies greatly across countries. On average across OECD countries, 11% of initial expenditure on upper secondary institutions comes from private sources. In the Nordic countries and Romania, upper secondary programmes are nearly entirely government funded while in ten countries, private sources account for at least 15% of expenditure on upper secondary institutions. For general education programmes, around one-quarter or more of expenditure comes from private sources in Chile (24%), Türkiye (33%) and the United Kingdom (25%). Household contributions (which include tuition fees) are the key driver behind high shares of expenditure coming from private sources in general programmes (Figure C4.2 and Table C4.2).

In some countries, relatively high private initial expenditure reflects the role of companies in providing apprenticeships and other forms of work-based learning in the context of combined school- and work-based programmes. For example, in Switzerland (which lacks data broken down by programme orientation), the share coming from private sources is 31%. Nearly two-thirds of upper secondary students in Switzerland are enrolled in vocational programmes and these programmes are predominantly delivered through apprenticeships where apprentices spend four days a week in a company (OECD, 2023[1]). In Germany, where apprenticeships are the predominant form of upper secondary VET, private sources after public-private transfers account for 38% of expenditure on upper secondary vocational programmes (Germany lacks data on expenditure before public-private transfers). In France, where both apprenticeships and internships are commonly used in vocational programmes, 26% of initial expenditure on vocational programmes comes from private sources, rising to 28% of final expenditure after public-private transfers (Table C4.2).

Figure C4.2. Share of expenditure on upper secondary institutions coming from households and other private entities, by programme orientation (2022)

In per cent, expenditure on educational institutions, initial funds (before public-private transfers)



1. Year of reference differs from 2022.
For data, see Table C4.2. For a link to download the data, see Tables and Notes section.

Expenditure as a share of GDP per capita

Expenditure per student as a share of GDP per capita shows investment relative to a country's resources. Table C4.3 (available on line) shows data for different programme orientations and by type of institution. Expenditure per upper secondary student is at least 30% of GDP per capita in France, Germany, Korea and Portugal. On average, OECD countries spend the equivalent of 22% of GDP per capita on a student in general upper secondary education and 25% of GDP per capita on a student in vocational upper secondary education.

In general upper secondary education, private institutions receive more funding per student than public ones on average across OECD countries (24% of GDP per capita, compared with 21%). The difference is relatively large in some countries including Denmark (46% versus 11%) and Türkiye (25% versus 6%). In contrast, in the Netherlands, where private institutions are nearly all government-dependent and funded in the same way as public institutions, there is no difference in expenditure per student between public and private institutions. For vocational upper secondary programmes, OECD countries have similar expenditure per student as a share of GDP per capita across types of institution, but slightly higher in public institutions (27% of GDP per capita on average compared with 25%). In some countries, however, there is a large difference between public and private institutions (general and vocational programmes combined). For instance, in Türkiye expenditure on public institutions amounts to 9% of GDP per capita per student compared to 23% for private institutions, while in Israel the figures are 14% of GDP per capita for public institutions and 71% for private ones (Table C4.3, available on line).

Government expenditure as a share of GDP

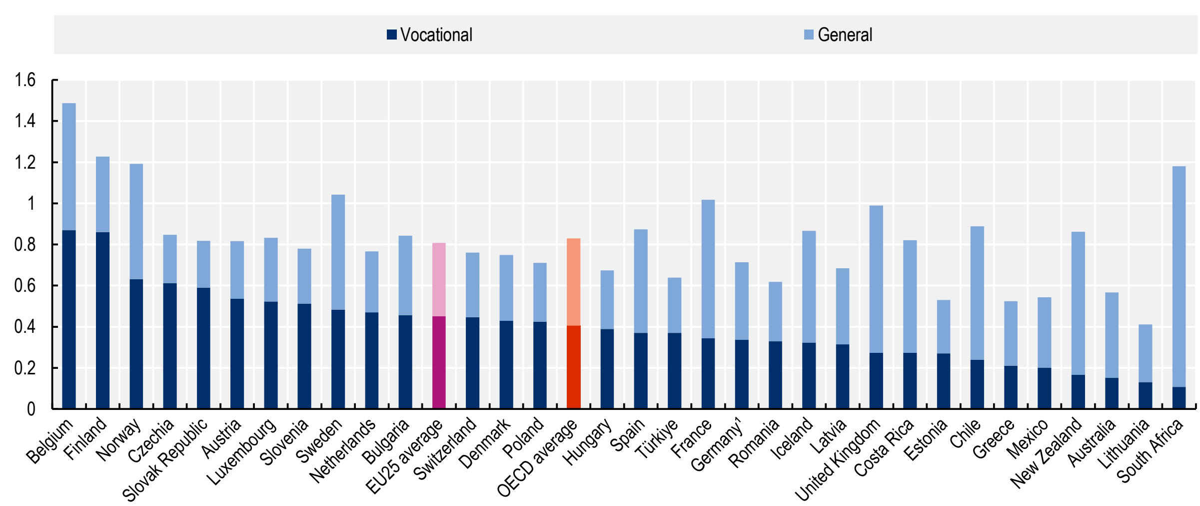
Figure C4.3 compares countries based on government expenditure on vocational and general education institutions as a percentage of GDP. This measure shows countries' public investment in different types of upper secondary education relative to the size of their economy. The focus on government expenditure (instead of total expenditure, which includes funding from private sources) emphasises public investment and avoids the comparability issues that may arise from the fact that some countries cannot or can only partially report companies' expenditure on vocational programmes.

On average across OECD countries, governments spend a similar share of GDP on general upper secondary programmes as on vocational ones, around 0.4% each (Figure C4.3). Eight countries – led by Belgium, Finland and Norway – allocate more than 0.5% of GDP to their upper secondary vocational programmes. These countries have a relatively large upper secondary vocational sector that is predominantly publicly funded. Countries with smaller vocational systems at this level tend to have higher public expenditure on general upper secondary programmes relative to GDP. For instance, the United States does not have a separate vocational track at upper secondary level and dedicates the equivalent of 0.85% of GDP to general programmes.

These results are driven by a combination of expenditure per student in each type of programme (Figure C4.1) and total enrolment in each programme. For example, within France and the United Kingdom expenditure per student is similar in general and vocational upper secondary education. In both countries, government expenditure as a percentage of GDP is higher for general programmes than for vocational ones (Table C4.4, available on line), as enrolment in general education is higher than in vocational programmes.

Figure C4.3. Government expenditure in general and vocational upper secondary education as a percentage of GDP (2022)

In per cent, expenditure on educational institutions



1. Upper secondary (vocational) includes lower secondary vocational programmes.
For data, see Table C4.4, available online. For a link to download the data, see Tables and Notes section.

Post-secondary non-tertiary education (not included in Figure C4.3) plays different roles across OECD countries, and is given varying weights within national education systems. These programmes are predominantly vocational. They tend to be relatively important, as indicated by expenditure as a share of GDP, in countries where vocational training largely takes place after the completion of initial schooling. For example, in New Zealand, government expenditure on post-secondary non-tertiary programmes is equivalent to 0.19% of GDP, exceeding the amount dedicated to upper secondary vocational programmes (0.17% of GDP), which also largely serve adult learners. Australia's government expenditure accounts for the equivalent of 0.07% of its GDP to post-secondary non-tertiary programmes, compared to 0.15% of its GDP for vocational upper secondary programmes. Ireland has limited vocational training in upper secondary education, and government expenditure on post-secondary non-tertiary programmes amounts to the equivalent of 0.07% of GDP (Table C4.4, available on line).

The role of different levels of government

Countries vary widely in the roles played by different levels of government in funding upper secondary education, ranging from fully centralised funding arrangements to systems where regional or local governments are the only sources of public funding for schools. In addition, countries may also transfer funding between levels of government for spending on schools, with some making extensive use of transfers – typically from central to regional or local levels.

Table C4.5 (available on line) shows how expenditure on upper secondary education is shared between different levels of government, both before inter-governmental transfers (initial funds) and after (final funds). On average, about two-thirds of government expenditure initially comes from central governments, but they spend only 55% of it directly: transfers to regional and local governments account for the remainder. This reflects a broader pattern across OECD countries: government spending (captured here by expenditure after inter-governmental transfers) tends to be more decentralised than revenue and this holds across different sectors, not just education (OECD, 2021[2]).

In Costa Rica, Greece, Iceland, Luxembourg and New Zealand, the funding of upper secondary education is fully centralised, with central government acting as the sole source of public funding. Funding is also highly centralised in Denmark, Hungary, the Slovak Republic and Türkiye, with over 95% of public expenditure spent directly by central governments. At the other end of the spectrum, the data show the key role played by autonomous communities in Spain, where over 80% of government expenditure comes from and is managed by regional level governments. In Switzerland cantons play a major role in financing upper secondary education, with 94% of funds spent by regional governments (Table C4.5, available on line). While not measured here, there is also considerable variation across countries in the kind of roles and decision-making powers regional and local authorities have. For example, subnational authorities may have different responsibilities depending on the type of expenditure (e.g. capital versus current) or the level of education considered (OECD, 2017[3]).

In some countries central governments play a more important role in funding vocational upper secondary programmes than in general programmes. For example, in Latvia and Lithuania, central governments are responsible for less than 15% of the expenditure on general upper secondary programmes, but it accounts for over 95% of expenditure of vocational programmes (after inter-governmental transfers). Similarly, in Estonia, the central government's share of expenditure after transfers is much lower for general programmes (23%) than for vocational programmes (87%). In Germany, regional governments (*Bundesländer*) are the main funders of general upper secondary programmes, with the central government responsible only for 2% expenditure before inter-governmental transfers and 1% of expenditure after. However, in the case of vocational programmes around 30% of government expenditure occurs at the central government level. In some countries, this reflects the fact that central government involvement is aimed at ensuring the portability of vocational skills within the country. In Germany, for example, primary and lower secondary education falls under the responsibility of federal states, while the central government is responsible for the vocational component of upper secondary programmes. Similarly, in Switzerland cantons are the sole funders of general upper secondary programmes, while the central government accounts for 21% of expenditure (before transfers) on vocational upper secondary education (Table C4.5, available on line).

In Australia, Austria and the Slovak Republic the opposite pattern can be observed in upper secondary programmes, although with less marked differences between the two programme orientations. For example, in Australia, after intergovernmental transfers, the central government is responsible for 29% of expenditure on general programmes, but only 14% of that on vocational programmes. In Austria, while central government is the main funder for both orientations, it accounts 86% of expenditure on general programmes but only 65% of expenditure on vocational ones, where regional governments play a more important role. In the Slovak Republic most expenditure at upper secondary level occurs at local level, but particularly so in funding vocational programmes, where 77% of expenditure comes from local government, against 59% for general programmes (Table C4.5, available on line)

Definitions

For the definitions of direct government expenditure on educational institutions and direct private expenditure on educational institutions, refer to Chapter C1.

For the definition of public and private educational institutions, refer to Chapter C2.

Methodology

For an overview of the methodology, see Chapter C1. For more detailed information, please refer to the OECD Handbook for Internationally Comparative Education Statistics (OECD, 2018[4]). For country-specific notes, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes*.

Source

For the data sources used in this Chapter, refer to Chapter C1. For additional details, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes*).

References

OECD (2023), *Education at a Glance 2023: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en. [1]

OECD (2021), *Fiscal Federalism 2022: Making Decentralisation Work*, OECD Publishing, Paris, https://doi.org/10.1787/201c75b6-en. [2]

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264304444-en. [4]

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. [3]

Tables and Notes

Chapter C4 Tables

Table C4.1	Expenditure on upper secondary and post-secondary non-tertiary educational institutions per student (2022)
Table C4.2	Distribution of expenditure on upper secondary educational institutions, by source of funds, before and after transfers (2022)
WEB Table C4.3	Expenditure on upper secondary and post-secondary non-tertiary educational institutions per student as a percentage of GDP per capita (2022)
WEB Table C4.4	*Expenditure on upper secondary and post-secondary non-tertiary educational institutions as a percentage of GDP (2022)*
WEB Table C4.5	*Distribution of central, regional and local government funds devoted to upper secondary education, before and after transfers between levels of government (2022)*

StatLink https://stat.link/a245sh

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table C4.1. Expenditure on upper secondary and post-secondary non-tertiary educational institutions per student (2022)

Note: Columns showing data on post-secondary non-tertiary education as well as upper secondary general and vocational programmes by type of institution are available for consultation on line.

1. Upper secondary includes post-secondary non-tertiary education.
2. Government expenditure on educational institutions includes transfers and payments to the non-educational private sector.
3. Total expenditure on educational institutions includes payments of households outside educational institutions.
4. Upper secondary (vocational) includes lower secondary vocational programmes.
5. Upper secondary includes lower secondary education.
6. Private institutions mainly concern government-dependent private institutions that receive their financing mainly from the government.
7. Vocational upper secondary includes vocational post-secondary non-tertiary education.
8. Year of reference 2021.

Table C4.2. Distribution of expenditure on upper secondary educational institutions, by source of funds, before and after transfers (2022)

Note: Columns showing data on all upper secondary (general and vocational) are available for consultation on line.

1. Upper secondary includes post-secondary non-tertiary education.
2. Total expenditure on educational institutions includes payments of households outside educational institutions.
3. Upper secondary (vocational) includes lower secondary vocational programmes.
4. Upper secondary includes lower secondary education.
5. Vocational upper secondary includes vocational post-secondary non-tertiary education.
6. Year of reference 2021.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table C4.1. Expenditure on upper secondary and post-secondary non-tertiary educational institutions per student (2022)

In equivalent USD converted using PPPs for GDP, direct expenditure within educational institutions, by programme orientation and type of institution

	Total (government, private and non-domestic expenditure)					Government expenditure				
	Upper secondary total (general and vocational)			Upper secondary general	Upper secondary vocational	Upper secondary total (general and vocational)			Upper secondary general	Upper secondary vocational
	Public and private institutions	Public institutions	Private institutions	Public and private institutions	Public and private institutions	Public and private institutions	Public institutions	Private institutions	Public and private institutions	Public and private institutions
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	17 523	20 969	13 958	18 743	14 655	14 121	19 549	8 504	14 737	12 674
Austria	20 474	21 272	15 976	17 566	22 463	19 408	20 855	11 259	16 375	21 483
Belgium[1]	18 588[d]	22 201[d]	16 446[d]	17 171[d]	19 765[d]	17 613[d]	21 417[d]	15 357[d]	16 131[d]	18 844[d]
Canada[2]	18 383	19 025	12 027	x(1)	x(1)	16 754[d]	18 125[d]	3 187	x(6)	x(6)
Chile[3]	6 361[d]	7 142[d]	5 926[d]	5 905[d]	8 690[d]	5 108	7 142	3 977	4 467	8 387
Colombia	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	5 184	5 316	517	5 194	5 163
Czechia	13 300	14 283	8 476	13 269	13 311	11 268	13 302	1 297	11 645	11 130
Denmark	12 340	11 874	33 502	8 992	17 252	12 091	11 781	26 148	8 674	17 104
Estonia	7 520	7 324	12 391	6 408	9 117	7 104	7 067	8 030	5 928	8 793
Finland[1]	11 443[d]	11 334[d]	11 788[d]	11 501	11 418[d]	11 346[d]	11 269[d]	11 590[d]	11 455	11 300[d]
France	18 127	x(1)	x(1)	16 827	20 556	15 174	x(6)	x(6)	15 436	14 683
Germany[4]	21 543[d]	18 124[d]	29 151[d]	17 872	25 259[d]	16 586[d]	17 766[d]	13 959[d]	17 464	15 697[d]
Greece	7 805	7 334	16 517	6 908	9 703	6 290	6 623	104	5 549	7 857
Hungary	8 292	7 406	10 640	7 828	8 717	7 219	7 144	7 416	6 393	7 974
Iceland	15 059	15 303	14 193	13 070	20 259	13 648	13 869[d]	12 864	11 846	18 361
Ireland	13 711	13 780	6 774	x(1)	x(1)	12 798	12 926	a	x(6)	x(6)
Israel[5]	11 815[d]	7 313[d]	37 811[d]	x(1)	x(1)	9 936[d]	7 223[d]	25 598[d]	x(6)	x(6)
Italy[1]	13 045[d]	13 959[d]	4 863[d]	x(1)	x(1)	12 482[d]	13 664[d]	1 907[d]	x(6)	x(6)
Japan[1]	13 914[d]	x(1)	x(1)	x(1)	x(1)	11 542[d]	x(6)	x(6)	x(6)	x(6)
Korea	29 935	36 024	21 260	x(1)	x(1)	28 158	34 742	18 778	x(6)	x(6)
Latvia	9 800	9 666	11 388	9 266	10 520	8 764	9 156	4 100	8 247	9 460
Lithuania	10 421	10 243	15 761	9 618	12 558	9 689	9 760	7 568	9 080	11 310
Luxembourg	30 592	32 520	22 289	30 141	30 902	29 004	32 520	13 866	26 393	30 806
Mexico	4 210	4 071	5 020	4 109	4 393	3 095	3 625	0	3 017	3 239
Netherlands[6]	19 185	16 900	19 403	17 058	20 253	13 574	16 203	13 324	15 694	12 510
New Zealand	13 250	13 274	13 048	14 300	10 077	11 063	11 800	4 936	11 899	8 537
Norway	21 921	20 136	39 463	20 065	23 585	19 952	20 136	18 135	19 865	20 029
Poland	8 929	8 668	11 002	8 296	9 426	7 546	7 746	5 952	6 936	8 024
Portugal[1]	13 523[d]	14 775[d]	9 639[d]	x(1)	x(1)	11 342[d]	14 435[d]	1 751[d]	x(6)	x(6)
Slovak Republic	10 967	11 266	9 572	9 419	11 718	10 116	10 434	8 637	8 619	10 843
Slovenia	11 798	11 746	12 959	12 073	11 666	10 066	10 272	5 482	10 594	9 811
Spain[7]	13 980[d]	15 837[d]	9 262[d]	12 380	17 279[d]	12 514[d]	15 400[d]	5 181[d]	10 704	16 248[d]
Sweden	15 223	15 242	15 169	13 321	18 266	15 162	15 217	14 999	13 232	18 249
Switzerland[1]	23 667[d]	x(1)	x(1)	x(1)	x(1)	16 283[d]	16 173[d]	16 907[d]	x(6)	x(6)
Türkiye	4 140	3 672	8 966	3 128	6 168	3 296	3 559	579	2 086	5 722
United Kingdom	16 757	14 241	17 471	17 638	14 468	13 051	13 657	12 879	13 083	12 968
United States[8]	16 683	16 823	15 319	16 683	a	15 347	16 715	2 013	15 347	a
OECD average	14 562	14 356	15 377	12 841	14 905	12 532	13 617	9 024	11 506	12 826
Partner and/or accession countries										
Argentina	m	m	m	m	m	5 093	6 159	2 321	m	m
Brazil	m	m	m	m	m	4 095	5 052	a	m	m
Bulgaria	7 575	7 302	19 486	7 549	7 597	7 184	7 279	2 986	7 111	7 246
China	5 670	5 941	4 303	m	m	4 610	5 447	389	m	m
Croatia	8 286	8 207	10 082	m	m	7 657	7 808	4 208	m	m
India	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m
Peru	2 619	m	m	2 619	a	2 346	m	m	2 346	a
Romania	7 804	7 828	6 776	8 632	7 190	7 591	7 615	6 549	8 373	7 012
Saudi Arabia[8]	m	m	m	m	m	9 997	11 652	34	m	m
South Africa	3 844	4 045	m	m	m	3 417	3 595	m	m	m
EU25 average	13 371	13 296	14 138	12 481	14 997	11 983	12 819	8 333	11 430	13 161
G20 average	14 136	m	m	m	m	11 051	12 379	5 379	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table C4.2. Distribution of expenditure on upper secondary educational institutions, by source of funds, before and after transfers (2022)

In per cent, direct expenditure within educational institutions, by programme orientation

	Upper secondary general						Upper secondary vocational					
	Initial expenditure (before transfers)			Final expenditure (after transfers)			Initial expenditure (before transfers)			Final expenditure (after transfers)		
	Government	Private	Non-domestic	Government	Private	Non-domestic	Government	Private	Non-domestic	Government	Private	Non-domestic
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	79.5	20.5	0.0	78.6	21.4	0.0	93.8	6.2	0.0	86.5	13.5	0.0
Austria	93.2	6.8	a	93.2	6.8	a	95.6	4.4	a	95.6	4.4	a
Belgium[1]	93.8[d]	4.7[d]	1.5[d]	93.9[d]	4.8[d]	1.3[d]	94.9[d]	4.5[d]	0.6[d]	95.3[d]	4.7[d]	0.0
Canada	m	m	m	x(16)	x(17)	x(17)	m	m	m	x(16)	x(17)	x(17)
Chile[2]	75.6[d]	24.4[d]	a	75.6[d]	24.4[d]	a	96.5[d]	3.5[d]	a	96.5[d]	3.5[d]	a
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	87.8	12.2	0.0	87.8	12.2	0.0	83.6	16.4	0.0	83.6	16.4	0.0
Denmark	96.5	3.5	0.0	96.5	3.5	0.0	99.1	0.9	0.0	99.1	0.9	0.0
Estonia	86.4	7.3	6.3	92.5	7.3	0.2	95.1	2.9	1.9	96.4	2.9	0.6
Finland[1]	100.1	-0.2	0.1	99.6	0.3	0.1	99.6[d]	0.3[d]	0.1[d]	99.0[d]	0.9[d]	0.1[d]
France	94.5	5.4	0.1	91.7	8.2	0.1	73.4	26.5	0.2	71.4	28.5	0.1
Germany[3]	m	m	m	97.7	2.3	0.0	m	m	m	62.1[d]	37.9[d]	0.0
Greece	79.7	10.9	9.4	80.3	10.9	8.8	79.1	10.5	10.3	81.0	10.6	8.5
Hungary	m	m	m	81.7	18.3	0.0	m	m	m	91.5	8.5	0.0
Iceland	m	m	m	90.6	9.4	0.0	m	m	m	90.6	9.4	0.0
Ireland	m	m	m	x(16)	x(17)	x(18)	m	m	m	x(16)	x(17)	x(18)
Israel[4]	m	m	m	x(16)	x(17)	x(18)	m	m	m	x(16)	x(17)	x(18)
Italy[1]	m	m	m	x(16)	x(17)	x(18)	m	m	m	x(16)	x(17)	x(18)
Japan[1]	m	m	m	x(16)	x(17)	x(18)	m	m	m	x(16)	x(17)	x(18)
Korea	x(13)	x(14)	x(14)	x(16)	x(17)	x(17)	x(13)	x(14)	x(14)	x(16)	x(17)	x(17)
Latvia	m	m	m	89.0	10.6	0.4	m	m	m	89.9	7.4	2.6
Lithuania	92.1	5.1	2.7	94.4	5.4	0.2	76.3	9.3	14.4	90.1	9.3	0.6
Luxembourg	87.6	5.1	7.3	87.6	5.1	7.3	99.7	0.3	0.0	99.7	0.3	0.0
Mexico	78.2	21.8	0.0	73.4	26.6	0.0	79.1	20.9	0.0	73.7	26.3	0.0
Netherlands	m	m	m	92.0	7.7	0.3	m	m	m	61.8	38.2	a
New Zealand	83.7	16.3	0.0	83.2	16.8	0.0	87.4	12.6	0.0	84.7	15.3	0.0
Norway	100.0	0.0	0.0	99.0	1.0	0.0	100.0	0.0	0.0	84.9	15.1	0.0
Poland	82.1	14.5	3.5	83.6	14.7	1.7	82.1	11.5	6.4	85.1	11.7	3.2
Portugal[1]	m	m	m	x(16)	x(17)	x(18)	m	m	m	x(16)	x(17)	x(18)
Slovak Republic	90.4	4.3	5.3	91.5	7.8	0.7	88.8	2.9	8.3	92.5	6.0	1.5
Slovenia	86.1	11.4	2.5	87.8	11.4	0.8	81.7	13.5	4.8	84.1	14.4	1.5
Spain[5]	83.0	13.5	3.5	86.5	13.5	0.0	90.9[d]	6.0[d]	3.1[d]	94.0[d]	6.0[d]	0.0
Sweden	99.3	0.7	0.0	99.3	0.7	0.0	99.9	0.1	a	99.9	0.1	a
Switzerland[1]	m	m	m	x(16)	x(17)	x(18)	m	m	m	x(16)	x(17)	x(18)
Türkiye	66.6	32.8	0.6	66.7	32.8	0.6	92.7	5.8	1.5	92.8	5.8	1.4
United Kingdom	75.4	24.6	0.0	74.2	25.8	0.0	95.3	4.3	0.4	89.6	9.9	0.4
United States[6]	92.0	8.0	a	92.0	8.0	a	m	m	a	m	m	a
OECD average	87.1	11.0	1.9	87.9	11.3	0.8	m	m	2.3	87.8	11.4	0.7
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	93.2	5.8	1.0	94.2	5.8	0.0	94.3	4.6	1.1	95.4	4.6	0.0
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	89.6	10.4	0.0	m	m	a	m	m	a
Romania	97.0	0.7	2.3	97.0	0.7	2.3	97.5	0.5	1.9	97.5	0.5	1.9
Saudi Arabia[6]	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	90.7	6.6	2.7	91.3	7.5	1.2	90.1	6.8	3.1	88.8	10.2	1.0
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

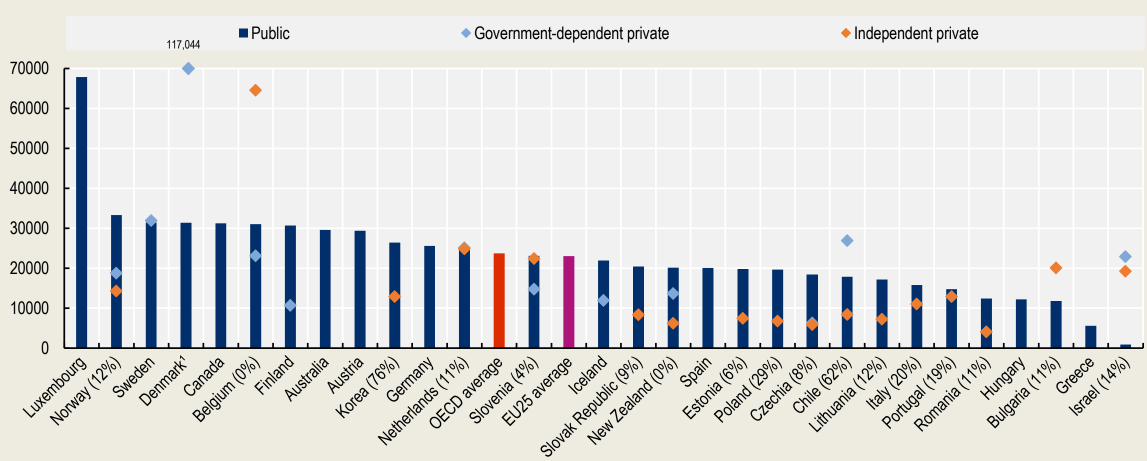
Chapter C5. How is tertiary education financed?

Highlights

- Tertiary education has expanded significantly, with nearly half of 25-34 year-olds now holding a degree compared to less than one-third of 55-64 year-olds. This growth places pressure on public budgets already strained by other priorities, making private funding sources important. They represent a larger share of total funding at the tertiary level than at any other level of education.
- Expenditure per student differs widely across OECD and partner countries and between types of institutions. Luxembourg and Norway spend over USD 33 000 per student in public institutions, while Greece and Israel spend less than USD 10 000.
- Countries and economies adopt different approaches to cost-sharing, reflecting both fiscal constraints and policy choices. Some systems, like Norway, maintain high levels of public financing, while others, like England (United Kingdom), rely more heavily on private funding, often coupled with student support mechanisms such as grants and loans.

Figure C5.1. Total expenditure per full-time equivalent student in bachelor's, master's and doctoral or equivalent, by type of institution (2022)

In equivalent USD converted using PPPs, expenditure on educational institutions



Note: The percentage in parentheses represents the share of students enrolled in independent private institutions.
1. In Denmark, there are only three government-dependent private institutions and the substantial expenditure per student is primarily influenced by research grants, which tend to fluctuate significantly over time.
For data, see Table C5.7, available on line. For a link to download the data, see Tables and Notes section.

Context

The rapid expansion of tertiary education across OECD countries has heightened the pressure on public budgets, particularly given ageing populations and growing demands for health care and defence spending. Ensuring the financial sustainability of tertiary education increasingly requires mobilising private contributions, including tuition fees, alongside public investment. However, the share of private expenditure in tertiary education is shaped not just by financial constraints, but also by broader societal and policy choices. Countries differ significantly in their views on the role of government in funding education – reflected, for example, in their tuition fee policies and the extent to which they promote cost-sharing between the state and individuals. As a result, funding structures have become more diverse, with differences across levels of study, types of institutions and student profiles. In this context, policy makers face complex trade-offs: they must secure adequate resources for each student to maintain quality, ensure equitable access through well-designed student support systems, and balance the respective contributions of households, governments and other entities, such as businesses and philanthropic organisations. Moreover, with research and development (R&D) representing a significant function of tertiary institutions, understanding how R&D activities are financed is central to assessing the overall investment in the sector. This chapter reviews national practices in tuition fee policies, the design of grant and loan systems, and the broader financing landscape, including public and private expenditure per student, the role of non-household actors, and R&D funding models, to inform policy choices that support access and affordability of tertiary education systems.

Other findings

- OECD countries and economies follow four main models of tuition and financial support in tertiary education, ranging from no or low tuition fees with generous aid to high tuition fees with limited support. Between these extremes, some pair high fees with robust financial aid, while others charge moderate fees and offer targeted support to a smaller share of students.
- Tuition fees for master's programmes often reflect the higher expected earnings of master's graduates compared to bachelor's graduates. In 13 out of 24 OECD countries and economies with available data, average tuition fees charged by public institutions are higher for master's degrees than for bachelor's degrees.
- Independent private institutions generally charge higher tuition fees than public institutions, particularly at master's level. This is partly because, by definition, they receive a smaller share of their funding from the government and are therefore more reliant on tuition fees to cover their costs. The only exceptions among OECD countries are Lithuania and Poland.
- Foreign students typically pay higher tuition fees than national students in about two-thirds of OECD countries and economies. However, higher fees do not necessarily deter international enrolment. In Australia, Canada and New Zealand, the share of international students in master's programmes is among the highest across the OECD, with international students representing at least 19% of enrolments – despite facing some of the highest tuition fees in the OECD.

Analysis

Expenditure by type of institution

Today almost half of 25-34 year-olds hold a tertiary qualification, compared to less than one-third of 55-64 year-olds, signalling a significant expansion of tertiary education. Securing sufficient resources to support this growth is a challenge for countries. With growing defence expenditure and rising healthcare costs associated with ageing populations, public budgets are increasingly strained and the expansion of tertiary education increasingly depends on private funding sources.

As countries expand access to tertiary education and some diversify how it is provided, it is increasingly important to assess the provision of tertiary education taking place outside public institutions and examine spending across all types of institutions: public, government-dependent private and independent private. These categories vary not only in their governance and sources of funding but also in their cost structures and resources available to students. Public institutions are primarily funded by governments, while government-dependent private institutions receive significant public funding but are privately governed. Independent private institutions, in contrast, rely largely on tuition fees and private funding sources.

In some systems, independent private institutions play a dominant role, educating most tertiary students: Chile (where 62% of tertiary students are enrolled in independent private institutions) and Korea (76%) are notable examples with longstanding traditions of private provision. These institutions help to absorb the growing demand for tertiary education. In contrast, many European countries rely almost exclusively on public or government-dependent private institutions, with independent private institutions serving only a marginal share of students. This is the case for example in Belgium, New Zealand and Slovenia with less than 5% of students enrolled in such institutions (Figure C5.1).

Data show that total expenditure per student can also vary markedly across institution types within countries. In Chile, for example, public institutions spend significantly more per student (USD 17 890) than independent private ones (USD 8 407), despite a majority of students being enrolled in independent private institutions. In Belgium, fewer than one per cent of students are enrolled in independent private institutions, but spending per student is very high (USD 65 739) and corresponds almost exclusively to expenditure on students enrolled in the College of Europe, which receives important funding from the European Union. Some systems, like the Netherlands, show more balanced spending per student, suggesting more similar funding structures across types of institutions (Figure C5.1).

Tertiary education systems also show significant variation in total expenditure per student across countries. In Luxembourg, total spending per student in public institutions reaches nearly USD 68 000, by far the highest among all OECD and partner countries with data. Nordic countries such as Denmark, Norway and Sweden also invest heavily, with public institutions spending over USD 31 000 per student. In contrast, Greece and Israel report spending below USD 10 000 per student in public institutions (Figure C5.1). These patterns highlight the importance of monitoring not just public funding levels but also total resource availability across different types of institutions. Policy makers should ensure that funding aligns with quality and equity goals, and that disparities across institutional types do not translate into unequal learning opportunities for students.

Expenditure on research and development in tertiary education

Investment in research and development (R&D) at the tertiary level is a key driver of long-term economic growth and competitiveness. Higher education institutions play a central role in producing the knowledge and innovation that fuel productivity gains, industrial transformation and technological advancement. Moreover, R&D activities in tertiary institutions often lead to spillover effects across the economy, as findings and technologies spread to other sectors through partnerships and skilled graduates.

Data show that R&D expenditure accounts for a large share of investment in tertiary education, underscoring the financial weight and economic importance of research within higher education systems. For example, in Denmark, expenditure on tertiary education as a share of GDP rises from 0.86% of GDP to 1.87% and from 0.73% to 1.50% in Sweden, meaning that about half of the total expenditure at this level goes to R&D activities (Table C5.1).

Between 2015 and 2022, expenditure on R&D within tertiary education institutions as a share of GDP remained relatively stable across OECD and partner countries. The OECD average rose slightly from 0.42% to 0.43% of GDP. While some countries such as Austria (from 0.44% to 0.69% of GDP), Belgium (from 0.48% to 0.56%) and Greece (from 0.36% to 0.44%) recorded notable increases, others recorded more modest rises. In contrast, several countries saw R&D expenditure stagnate or decline, including the Slovak Republic, where it fell from 0.59% of GDP to 0.29%.

Others, such as Romania and Bulgaria, maintained very low levels throughout the period (Table C5.8, available on line).

It is important to note that the figures on R&D spending refer to expenditure occurring within tertiary education institutions and exclude R&D taking place outside of tertiary education institutions. In countries with extended dedicated research institutes, these data do not capture a considerable share of their R&D.

Box C5.2 uses data from government budget allocations for R&D to present comparative data on government-financed R&D into the field of education, offering a complementary perspective on public investment in R&D covering expenditure within and outside higher education institutions

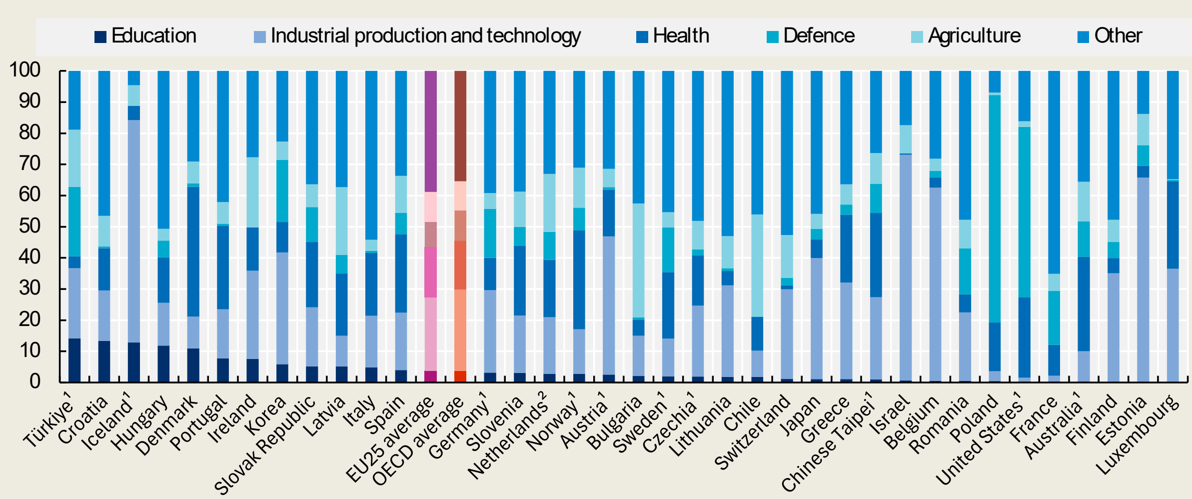
Box C5.1. Government expenditure on research and development into education

Research and development (R&D) into the education field of study underpins continuous efforts to improve education systems, teaching and learning. Such research helps identify which teaching methods work best and how students learn most effectively. Data from the government budget allocations for R&D (GBARD) show that 3.7% of public R&D budgets across OECD countries is allocated to research in this field, making it the third least-funded area out of the 12 areas covered (OECD, 2025[1]). Despite growing demands for innovation in education systems, a consistently low share of R&D has been dedicated to the field of education since 2020 (Vincent-Lancrin, 2023[2]), highlighting a persistent underinvestment in educational research.

While direct comparisons should be made with caution due to the differing nature of data across countries, most OECD and partner countries (22) allocate less than 3% of their public R&D budget to education, 7 allocated between 3% and 6%, and 7 over 6%. The two fields receiving the largest shares of public R&D budgets are *industrial production and technology* (26.1%) and *health* (15.7%) (Figure C5.2).

Figure C5.2. Share of government R&D budget allocated to education (2023)

In per cent



Note: The category "other" includes: “energy”, “exploration and exploitation of space”, “environment”, “transport, telecommunication and other infrastructures”, “political and social systems, structures and processes”, “exploration and exploitation of the Earth”, and “culture, recreation, religion and mass media”. Expenditure on general advancement of knowledge has been excluded from the analysis.
1. Data refer to 2024.
2. Data refer to 2025.
Source: OECD (2025), Government budget allocation for R&D (GBARD). For a link to download the data, see Tables and Notes section.

GBARD is the most widely available indicator of public funding for educational R&D in OECD countries, capturing the share of national budgets explicitly allocated to research across specific socio-economic objectives (or fields of research), including education. However, a large share of research activities is classified under the broader category of *general advancement of knowledge* and various research areas (e.g. educational sciences, psychology and sociology) fall under this broader category (OECD, 2015[3]). To focus more precisely on funding allocated to specific fields, the data in Figure C5.2 exclude the category of *general advancement of knowledge*.

Government expenditure on tertiary education

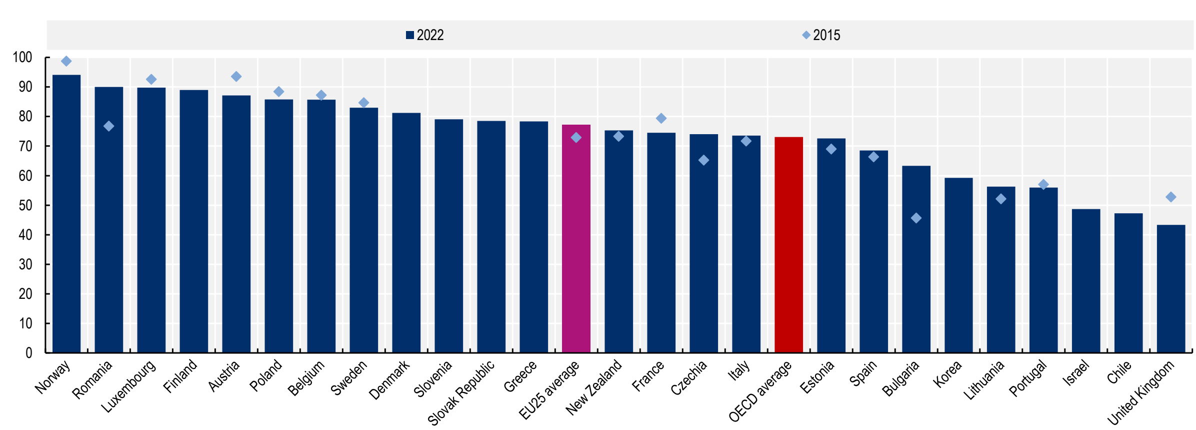
While primary and secondary education are mainly publicly funded, the lower share of public sources in the funding of tertiary education is not solely driven by constrained public budgets. There are also theoretical reasons for partly financing tertiary education through private sources. Tertiary education brings broad societal benefits but also economic returns to individuals in the form of better employment rates and higher earnings. This underpins the rationale behind cost-sharing: the idea that students (and their families) should bear part of the cost of their tertiary studies.

In practice, the extent of cost-sharing varies widely across countries, and recent trends show divergent paths. Despite some national shifts over time, the overall share of expenditure covered by government sources has remained relatively stable across OECD and partner countries with data. In traditionally publicly funded systems such as Norway, government sources still account for a large share of tertiary education funding, although the share has declined slightly from 99% in 2015 to 94% in 2022. In other countries, such as Bulgaria and Romania, the public share has increased by more than 10 percentage points. Other countries remain heavily reliant on private funding sources. In Chile, only 47% of tertiary education expenditure comes from government sources, and in the United Kingdom, it is just 43%, the lowest across OECD and partner countries with data (Figure C5.3).

These differences reflect not just fiscal capacity but also distinct policy choices about who should bear the costs of education. However, high private costs do not necessarily mean reduced access or equity: countries with well-developed student support systems, including income-contingent loans or generous grants, can still maintain high levels of participation and mitigate financial barriers. Ultimately, the effectiveness of cost-sharing models depends not just on the balance of public and private funding, but also on how student support is designed and targeted to promote fairness and affordability.

Figure C5.3. Trends in the share of expenditure coming from government sources in bachelor's, master's and doctoral or equivalent programmes (2015 and 2022)

In per cent, expenditure on educational institutions, initial expenditure



For data, see Table C5.2. For a link to download the data, see Tables and Notes section.

Other sources of funding in tertiary education

A comprehensive understanding of tertiary education funding requires examining not only the level and evolution of public spending, but also the scale and role of private contributions. This helps clarify how the costs of education are shared among key actors. Unlike primary and secondary education, where public sources account for 90% of total expenditure on average, almost one-third of total funding for tertiary institutions came from the private sector across OECD countries in 2022 (Table C5.6, available on line). The large share of private spending at the tertiary level reflects the widespread use of cost-sharing arrangements, in which public authorities, households and, in some cases, other private entities such as businesses or foundations, jointly finance the system. Notably, about two-thirds of this private funding comes from households, with the remainder coming from other private entities including private businesses and non-profit organisations (Box C5.2).

The scale of non-household private expenditure on tertiary institutions varies substantially across OECD and partner countries, from 0% of total expenditure in Mexico and Romania to 23% in Canada, Israel and the United States (Table C5.6, available on line). These differences reflect differences across systems: whether institutions operate revenue-generating services or have substantial investments or endowments that generate income, or whether there is an established tradition of private research funding or philanthropy in the country. For example, in some OECD countries, such as the United Kingdom and the United States, private foundations play a significant role in funding research activities, whereas in others, such as the Nordic countries, this pattern of funding is less developed, as companies cover nearly all the private funding.

Box C5.2. Private expenditure on tertiary education institutions

The joint data collection by UNESCO, the OECD and Eurostat (UOE), which is the basis for the data provided in this chapter, uses specific concepts and categories to refer to the financing of tertiary education institutions, which do not necessarily correspond to the concepts and categories used in national data and reporting systems (OECD, 2018[4]). The UOE data categorise expenditure on tertiary education institutions into spending by public bodies (government), households, other private entities and organisations based abroad (non-domestic). The government category encompasses all forms of public subsidy to tertiary educational institutions, including core operating grants, competitive research funding provided by public research funding agencies and other targeted, project-based grants from public bodies. Household expenditure captures tuition and other fees paid by domestic and international students and their families, while non-domestic (international) expenditure measures funding to institutions from public agencies and private companies and organisations based in another country. This latter category may include grants from European Union funds or international organisations, as well as funding by foreign governments or companies and non-profit bodies based abroad.

The category of other private entities is used to capture sources of funding which cannot be categorised as public bodies, households or organisations based abroad. The main sources of funds captured by this category are:

- research grants or contracts agreed with private entities, including businesses and non-profit organisations
- other service contracts with private entities (to provide consulting or contracted training services, for example)
- income from operating student residences, catering and other student services
- income from investments, endowments and donations.

National statistical bodies report data to the UOE data collection based on institutions' national data collections, which are themselves based on institutional income statements. The precise categories included in these income statements vary by country, which, in turn, influences what is included in the category of expenditure by other private entities for each OECD country.

Tuition fee policies in tertiary education

This section reviews national practices in tuition fee policies, with a particular focus on the interaction between tuition fees and public support for students. It examines the financing models countries adopt, the design of grant and loan systems, and the implications of different approaches for student debt, affordability and access to education.

Differentiation by level of study

In most OECD countries and economies, tuition fees vary considerably by level of study, with fees for master's programmes typically higher than those for bachelor's programmes – by 29% on average – reflecting the increased labour-market value of advanced degrees. For example, tuition fees for master's degrees in public institutions are 40-86% higher than for bachelor's programmes in countries such as Australia, Canada, the French Community of Belgium, France, Latvia and Spain. In Lithuania, fees at the master's level are more than double those at the bachelor's level. In contrast, Austria, the Flemish Community of Belgium, Japan, Luxembourg, the Netherlands and Switzerland charge similar fees for both levels, while Nordic countries (like Denmark, Finland, Norway and Sweden) and Türkiye do not charge tuition fees at any level for national and EU/EEA students (Table C5.3).

Short-cycle tertiary programmes (ISCED 5) are also expanding in many countries as a more affordable and shorter alternative to longer tertiary programmes. In public institutions, tuition fees for these programmes are generally lower than those for bachelor's degrees. In France and Spain, they are generally free of charge – unlike other levels of tertiary education – while in the United States, fees average less than USD 3 600 per year, less than half the average cost of bachelor's programmes. In contrast, in Lithuania, Luxembourg and the Netherlands, tuition fees for short-cycle and bachelor's programmes are broadly equivalent. In Norway, short-cycle tertiary programmes are the only level of tertiary education for which tuition fees are charged (Table C5.3).

Differentiation by type of institution

The growing demand for higher education is not only changing student pathways but also prompting structural shifts in tertiary education systems. While the bachelor's degree remains the most commonly obtained qualification, a rising share of students are continuing their studies to the master's level: in 2024, 17% of young adults held a master's degree as their highest qualification, up from 15% in 2019 (see Chapter A1). This upward trend reflects higher aspirations, increased competition in the labour market and greater availability of advanced programmes.

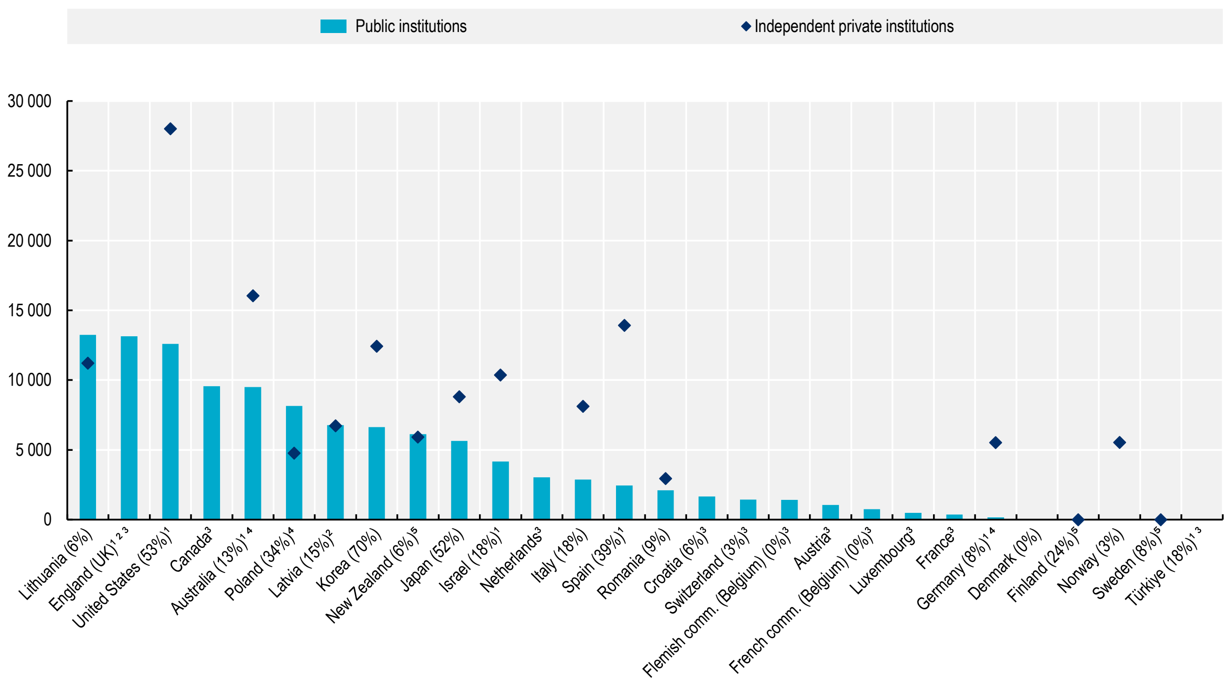
The resulting expansion has major implications for the financing and development of higher education institutions, which need to respond by increasing capacity and adapting their programmes and infrastructure to meet diverse and growing needs. Private institutions have played a growing role in absorbing this demand. Between 2013 and 2023, the share of students enrolled in master's programmes in independent private institutions increased in most countries and economies, and from 15% to 19% on average. This trend was particularly marked in Finland, France, Italy and Spain, where enrolment in private institutions at the master's level rose by more than 9 percentage points over this period (Table C5.3).

Tuition fees in independent private institutions are often significantly higher than in public ones – over five times in Spain and more than twice in countries including Israel, Italy and the United States, but less than double in countries like Australia, Japan, Korea and Romania. In some countries, the large gap is largely driven by the relatively low tuition fees in public institutions, rather than exceptionally high fees in private ones. For example, in Spain, the average annual tuition for students enrolled in master's programmes in independent private institutions exceeds USD 13 900, compared to around USD 2 400 in public institutions (Figure C5.4 and Table C5.3).

The growing role of private institutions raises concerns about quality assurance and regulatory oversight, particularly where institutions rely heavily on revenue from tuition fees to sustain operations. As tertiary education systems continue to diversify, the challenge for policy makers will be to strike a balance between expanding access, ensuring quality and maintaining financial sustainability across both public and private sectors.

Figure C5.4. Annual average tuition fees charged to national students for master's or equivalent programmes, by type of institution (2022/23)

In USD converted using PPPs



Note: The percentage in parentheses refers to the share of master's students enrolled in independent private institutions.
1. Reference year differs from 2022/23.
2. Government-dependent private institutions instead of public institutions.
3. Data on independent private institutions are missing.
4. Government-dependent and independent private institutions are combined. Data includes foreign students in Germany.
5. Government-dependent private institutions instead of independent private institutions.
For data, see Table C5.3. For a link to download the data, see Tables and Notes section.

Differentiation between national and foreign students

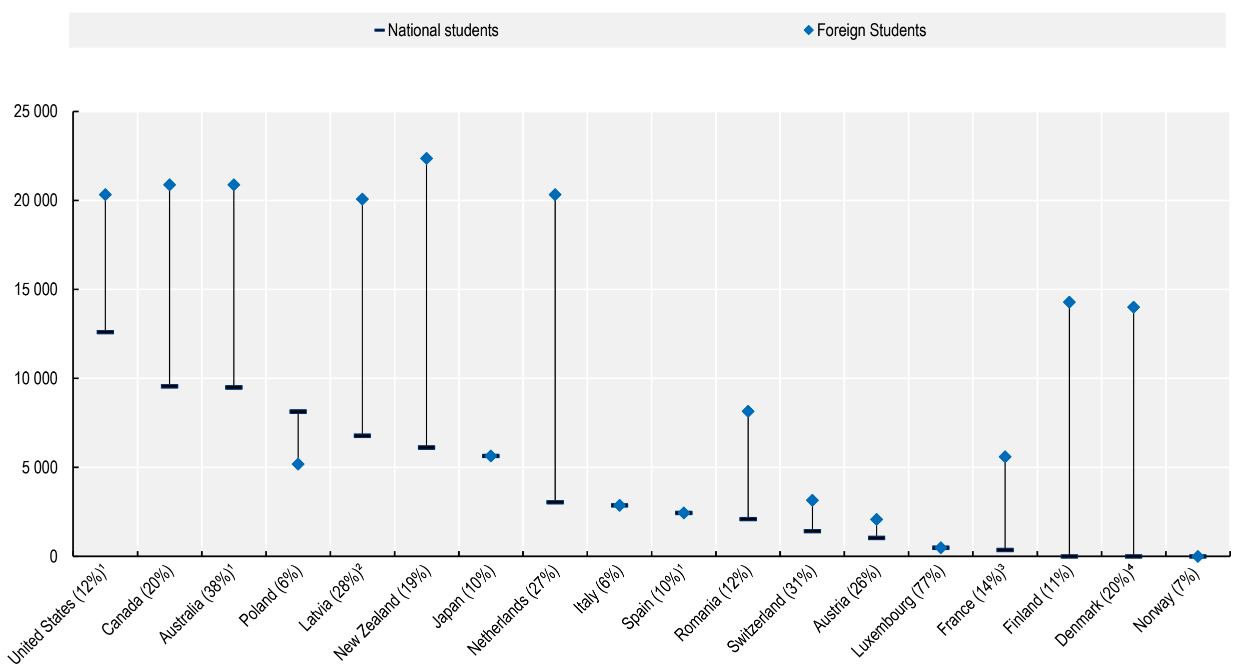
In a growing number of countries, tuition fees vary not only by the type of institution or programme, but also by the nationality or residency status of students. Globally, around 21% of students enrolled in master's programmes in public institutions across OECD countries are international or foreign students. They contribute positively to the global visibility and prestige of tertiary institutions and also provide an opportunity to generate additional revenue, particularly if they pay higher tuition fees than national students. About two-thirds of OECD countries (12 out 18 with available data) charge higher tuition fees to foreign students than to domestic ones for master's or equivalent programmes, making this an increasingly important source of institutional funding. However, it should be noted that not all foreign students are subject to higher fees. In EU countries, for example, tuition fee policies distinguish between EU/EEA and non-EU/EEA students: only the latter are generally required to pay different fees, while EU/EEA students are treated on the same footing as domestic students (Figure C5.5 and Table C5.3).

In some countries, the gap in tuition fees between domestic and foreign students can be substantial. In Australia, Canada, Denmark, Finland, Latvia, the Netherlands and New Zealand, foreign students pay over USD 10 000 more per year for master's programmes than domestic students in public institutions. Despite these higher fees, these countries continue to attract large numbers of international students, drawn by the quality of education, English-speaking environments and favourable post-graduation labour-market opportunities (Figure C5.5).

As countries seek to balance the goals of equitable access and financial sustainability, many have revised their tuition policies. This includes traditionally tuition-free systems such as Denmark and Sweden, which have introduced fees for non-EU/EEA students over the past decades. These changes reflect a broader trend among countries to impose higher charges on international students as part of efforts to diversify funding sources for tertiary education and alleviate pressure on public budgets.

Figure C5.5. Annual average tuition fees charged by public institutions to national and foreign students for master's or equivalent programmes (2022/23)

In USD converted using PPPs



Note: The percentage in parentheses refers to the share of mobile/foreign students enrolled in master's or equivalent programmes in 2022 (see Chapter B4). It is important to note that some foreign/mobile students are subject to the same tuition fees as national students. For instance, in the EU countries depicted in this chart, only students from outside the EU/EEA are typically required to pay higher fees, while EU/EEA students are generally treated the same as domestic students regarding tuition policies. For detailed information on foreign/mobile students by country of origin, please refer to Chapter B4.

1. Reference year differs from 2022/23.
2. Government-dependent private institutions instead of public institutions.
3. The percentage in parentheses refers to the share of mobile students and less than 10% of mobile students from outside the EU/EEA end up paying higher tuition fees than national students.
4. Tuition fees charged for foreign students are between USD 8 000 and USD 21 000.

For data, see Table C5.3. For a link to download the data, see Tables and Notes section.

Public financial support for tertiary students

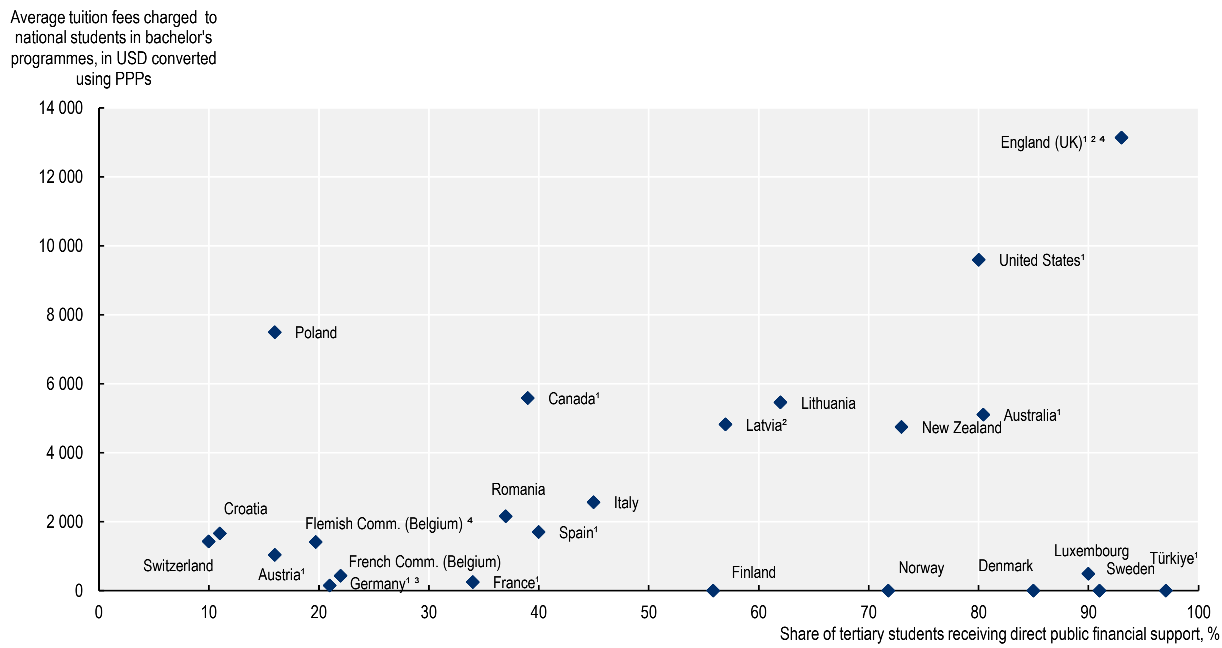
Country approaches to supporting students

As tertiary education continues to expand, countries must find sustainable ways to fund growing enrolment while ensuring equitable access and maintaining quality. This balancing act increasingly relies on a mix of tuition fees, student support schemes and private contributions. In 2023, OECD countries and economies could be grouped into four broad financing models for tertiary education (Figure C5.6 and Table C5.3 and Table C5.4):

- Low or no tuition fees combined with high levels of financial support are characteristic of systems in countries such as Denmark, Finland, Luxembourg, Norway, Sweden and Türkiye, where annual tuition fees in public institutions are below USD 500 and more than half of students receive public support through grants and/or loans. These systems offer generous student benefits that reduce upfront costs and promote access, but graduates often contribute more through higher income tax rates later in life. This reflects a broader policy choice to finance tertiary education collectively through progressive taxation rather than through individual student payment (OECD, 2024[5]).
- High tuition fees combined with well-developed financial aid systems, as seen in Australia, England (United Kingdom), Latvia, Lithuania, New Zealand and the United States. In these countries, average tuition fees for bachelor's programmes in public institutions typically exceed USD 4 000. However, more than 50% of students receive robust financial aid, primarily in the form of student loans and, in some cases, need-based grants. Loans in Australia, England (United Kingdom), New Zealand and the United States are income contingent, meaning graduates only start repaying them once they reach a certain income threshold, whereas in Latvia and Lithuania loans have fixed-term repayments (see next section). Student debt levels are high in many of these countries, with average debt per borrower exceeding USD 20 000 in Australia, England (United Kingdom) and the United States (Table C5.5, available on line).
- Moderate tuition fees combined with targeted student support are characteristic of systems in Austria, the Flemish and French Communities of Belgium, Croatia, France, Germany, and Switzerland. In these countries and economies, annual tuition fees for bachelor’s programmes in public institutions typically range from USD 150 to USD 2 000. Financial aid is generally means tested and directed toward the most disadvantaged students, based on family income or other social criteria, rather than being universally available. As a result, less than 40% of students receive public financial support in all of these countries. These systems rely predominantly on public funding to ensure broad access to higher education, while limiting the accumulation of student debt.
- Relatively high tuition fees with limited public financial support, as observed in countries like Canada and Poland. In these systems, less than 40% of students receive public grants or scholarships, while tuition fees are substantial, averaging over USD 5 500 in both countries for a year in bachelor’s programmes in public institutions. As a result, students and their families bear a significant share of the cost, which can create financial barriers for low-income groups unless mitigated by institutional aid or private support mechanisms.

These four models of tuition fee and financial aid systems offer distinct advantages and trade-offs. Countries with low or no tuition and generous public support promote broad access and low student debt, but often finance these benefits through higher taxes later in life. High-fee systems with strong financial aid can maintain access for many, yet often result in high levels of student debt and long repayment periods. Moderate-fee systems with targeted aid rely on progressive taxation to limit overall costs, but risk under-supporting middle-income students. Finally, systems with high fees and limited aid may incentivise institutional efficiency but can create financial barriers for disadvantaged groups. Ultimately, no model is without its challenges – the effective design of policies depends on national priorities, fiscal capacity and equity goals (OECD, 2024[5]).

Figure C5.6. Annual average tuition fees charged by public institutions to national students enrolled in bachelor's programmes and share of national students benefiting from direct public financial support (2022/23)



1. Reference year differs from 2022/23.
2. Government-dependent private institutions instead of public institutions.
3. Master's and doctoral programmes are combined with bachelor's programmes. Data includes foreign students in Germany.
4. Short-cycle tertiary programmes are combined with bachelor's programmes.
For data, see Table C5.3 and Table C5.4. For a link to download the data, see Tables and Notes section.

Forms of public financial support for tertiary students

The four broad models of tuition fees and financial support do not tell the whole story about how countries and economies support their tertiary students. Beyond whether students receive a loan or a grant, countries differ considerably in the amount of support provided, the eligibility criteria and the repayment conditions. These factors significantly shape students' financial realities both during their studies and after graduation.

Grant amounts vary widely across countries and economies, with an OECD average of around USD 5 500 per year. In Romania and the United States, States, average grants are below USD 2 500, whereas in Austria, Denmark, Italy and Switzerland, they exceed USD 9 000. In roughly two-thirds of countries and economies with available data, public grants surpass average tuition fees charged by public institutions, offering students some support for living expenses. However, in countries including Korea, Latvia, Romania and the United States, grants cover only a small fraction of tuition fees, pushing students to rely more heavily on loans or family resources. While there is some variation in the eligibility criteria for public grants and scholarships across countries and economies, common patterns can still be observed. About three-quarters of countries and economies award means-tested grants based on financial need, around two-thirds offer merit-based scholarships and only about one-quarter provide universal grants to all tertiary entrants (Table C5.4).

In comparison, student loans tend to be more universally accessible, with less variation in eligibility across countries. However there are differences in how repayment is structured. In fixed-repayment systems – used in the majority of countries with available data – graduates must begin repaying their loans within a set timeframe, regardless of income. In contrast, income-contingent repayment systems, implemented in countries and economies including Australia, England (United Kingdom) and New Zealand, mean repayments are delayed until graduates reach a minimum income threshold. These systems provide greater financial protection for low-income earners but may lead to longer repayment periods and increased fiscal costs for governments (Table C5.4 and Table C5.5, available on line).

Across OECD countries and economies, the average amount students borrow through loans varies more than four-fold. In countries with high tuition fees and relatively well-developed loan systems – defined here as systems with average annual tuition fees of over USD 5 000 for bachelor's programmes in public institutions and where more than 40% of students take out loans – borrowing ranges from around USD 5 000-6 000 per year in Latvia and Australia, to approximately USD 8 800 in New Zealand, and over USD 23 000 in England (United Kingdom). In some countries, such as New Zealand, students can also borrow to cover living costs or course-related costs in addition to tuition fees. Interestingly, even in tuition-free systems such as Norway, Sweden and Finland, more than half of students also take out loans, primarily to cover living expenses (Table C5.5, available on line).

These differences in loan amounts and repayment designs, alongside tuition levels and living expenses, shape the total debt burden that students carry upon graduation. In countries and economies where fees and living costs are both high, students often graduate with substantial debt – exceeding USD 68 683 on average in England (United Kingdom). Yet even in Norway, despite a lack of tuition fees, student debt can mount up (averaging over USD 46 000) due to generous loans covering living expenses. These examples underline how the structure and targeting of financial aid, and not just the overall level of public support, are critical to promoting equity, affordability and sustainable outcomes for students (Table C5.5, available on line).

Definitions

In this chapter, **national students** are defined as the citizens of a country who are studying within that country. **Foreign students** are those who are not citizens of the country in which the data are collected. While pragmatic and operational, this classification is inappropriate for capturing student mobility because of differing national policies regarding the naturalisation of immigrants. For European Union (EU) and the European Economic Area (EEA) countries, citizens from other EU countries usually pay the same fees as national students. In these cases, foreign students refer to students who are citizens of countries outside the EU. Further details of these definitions are available in Chapter B4.

Tuition fee amounts refer to **gross tuition fees** charged by institutions, before grants, scholarships and tuition waivers are applied.

For the definition of expenditure on educational institutions, direct government expenditure on educational institutions, direct private expenditure on educational institutions, initial and final spending, and research and development, refer to Chapter C1.

For the definition of public and private educational institutions, refer to Chapter C2.

Methodology

Tuition fees and loan amounts in national currencies are converted into equivalent USD by dividing the national currency by the purchasing power parity (PPP) index for gross domestic product. The same PPPs as those used in *Education at a Glance 2024* were applied in this edition to ensure consistency between data released in both editions. The amounts of tuition fees and associated proportions of students should be interpreted with caution, as they represent the weighted averages of the main tertiary programmes and may not cover all educational institutions.

Student loans include the full range of student loans extended or guaranteed by governments, in order to provide information on the level of support received by students. The gross amount of loans provides an appropriate measure of the financial aid to current participants in education. Interest payments and repayments of principal by borrowers should be taken into account when assessing the net cost of student loans to public and private lenders. In most countries, loan repayments do not flow to education authorities and the money is not available to them to cover other expenditure on education.

Chapter C5 takes the full amount of scholarships/grants and loans (gross) into account when discussing financial aid to current students. Some OECD countries have difficulty quantifying the amount of loans to students. Therefore, data on student loans should also be treated with caution.

For an overview of the methodology based on the joint data collection by UNESCO, the OECD and Eurostat (UOE), see Chapter C1. For more detailed information, please refer to the OECD Handbook for Internationally Comparative Education Statistics (OECD, 2018[4]). For country-specific notes, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (*https://doi.org/10.1787/fcfaf2d1-en*).

Source

Data on tuition fees and financial support to tertiary students refer to the academic year 2022/23 or calendar year 2022 and are based on a special survey administered by the OECD in 2023. Trend data refer to academic year 2012/13 or calendar year 2012.

For an overview of the data sources used based on the joint data collection by UNESCO, the OECD and Eurostat (UOE), refer to Chapter C1. For additional details, see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (*https://doi.org/10.1787/fcfaf2d1-en*).

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Tables and Notes

Chapter C5 Tables

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StatLink https://stat.link/2jhv3x

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table C5.1 **Expenditure on tertiary educational institutions (2022)**

Note: Columns showing data on expenditure per student as a percentge of GDP per capita, and on expenditure on educational institutions as a percentage of GDP are available for consultation on line.

1. Total expenditure on educational institutions includes payments by households outside educational institutions.
2. Expenditure on tertiary education includes some expenditure on post-secondary non-tertiary education and some expenditure on upper secondary vocational education (KOSEN grades 1 to 3).
3. Year of reference 2021.

Table C5.2 Change in total expenditure on tertiary institutions (2015 to 2022)

Note: Columns showing the data used to calculate changes between 2015 and 2022 are available for consultation on line.

1. Total expenditure on educational institutions includes payments by households outside educational institutions.

2. Expenditure on tertiary education includes some expenditure on post-secondary non-tertiary education and some expenditure on upper secondary vocational education (KOSEN grades 1 to 3).

Table C5.3. Annual average (or most common) tuition fees charged by tertiary institutions to national and foreign students (2022/23)

1. Reference year differs from 2022/23: calendar year 2021 for Australia and Germany; academic year 2021/22 for England (UK), Spain and the United States; and academic year 2023/24 for Türkiye.
2. Government-dependent and independent private institutions are combined. In Germany, only academic programmes are included.
3. Government-dependent private institutions instead of independent private institutions.
4. Government-dependent private institutions instead of public institutions.
5. Tuition fees for foreign students typically refer to tuition fees for out-of-state national students. However, in a minority of institutions, tuition fees can be lower for out-of-state national students.

Table C5.4. Public financial support for students enrolled in tertiary programmes (2012/13 and 2022/23) and types and eligibility of public grants/scholarships (2022/23)

1. Reference year for distribution of public financial support differs from 2022/23: calendar year 2021 for Australia; academic year 2021/22 for Austria, England (UK), France and Spain; calendar year 2022 for Germany; academic year 2019/20 for the United States; and academic year 2023/24 for Türkiye.
2. Public institutions only.
3. Government-dependent private institutions instead of public institutions.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)].

Table C5.1. Expenditure on tertiary educational institutions (2022)

In equivalent USD converted using PPPs for GDP, direct expenditure within educational institutions, by level of education

	Expenditure on educational institutions per student (in equivalent USD converted using PPPs for GDP)											
	Total (government, private and non-domestic expenditure)						Government expenditure					
	Short-cycle tertiary		Bachelor's, master's and doctoral or equivalent		All tertiary		Short-cycle tertiary		Bachelor's, master's and doctoral or equivalent		All tertiary	
	Including R&D	Excluding R&D	Including R&D	Excluding R&D	Including R&D	Excluding R&D	Including R&D	Excluding R&D	Including R&D	Excluding R&D	Including R&D	Excluding R&D
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	12 289	10 619	28 272	17 235	25 162	15 948	8 249	a	9 697	a	9 415	a
Austria	22 100	22 100	26 894	15 142	26 190	16 164	21 337	21 337	23 308	12 701	23 018	13 969
Belgium	17 696	17 696	26 373	16 679	25 989	16 724	16 065	16 065	22 198	14 908	21 927	14 959
Canada	21 340	m	31 225	17 566	27 582	m	10 952	m	15 278	6 210	13 684	m
Chile[1]	5 683[d]	5 683[d]	13 567[d]	12 914[d]	11 639[d]	11 145[d]	2 565	2 565	5 099	4 559	4 479	4 071
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	x(5)	m	x(5)	m	18 405	m	x(11)	x(12)	x(11)	x(12)	16 922	16 920
Czechia	31 144	31 144	17 177	11 083	17 221	11 147	29 563	29 563	12 723	7 821	12 777	7 890
Denmark	14 904	14 431	31 488	13 509	29 680	13 610	12 057	11 611	25 587	12 730	24 113	12 608
Estonia	a	a	19 011	10 447	19 011	10 447	a	a	15 291	9 163	15 291	9 163
Finland	a	a	20 456	10 850	20 456	10 850	a	a	18 141	10 631	18 141	10 631
France	21 637	21 637	21 302	13 724	21 379	15 546	10 349	10 349	15 402	9 656	14 238	9 816
Germany	9 115	9 115	23 303	13 026	23 269	13 016	3 425	3 425	19 539	11 133	19 500	11 115
Greece	a	a	5 620	3 586	5 620	3 586	a	a	4 497	3 155	4 497	3 155
Hungary	22 610	22 610	20 390	16 649	20 476	16 881	13 601	13 601	12 904	9 515	12 931	9 674
Iceland	20 234	m	20 234	m	20 234	m	18 209	m	18 209	m	18 209	m
Ireland	x(5)	x(6)	x(5)	x(6)	24 241	19 425	x(11)	x(12)	x(11)	x(12)	13 509	9 560
Israel	6 810	6 810	19 333	13 029	15 057	10 905	4 253	4 253	8 897	2 592	7 311	3 159
Italy	3 691	3 691	14 867	10 423	14 713	10 330	3 557	3 557	9 069	5 401	8 992	5 376
Japan[2]	16 262	a	23 203	a	21 836	a	2 828	a	9 497	a	8 184	a
Korea	7 995	7 824	16 200	11 934	14 695	11 180	2 566	2 453	7 527	4 398	6 617	4 041
Latvia	12 402	12 397	12 419	8 710	12 416	9 203	7 769	7 767	6 735	4 091	6 873	4 582
Lithuania	a	a	15 950	11 247	15 950	11 247	a	a	11 151	7 100	11 151	7 100
Luxembourg	11 255	11 255	67 808	39 241	60 979	35 862	11 135	11 135	60 323	37 494	54 384	34 311
Mexico	x(5)	x(6)	x(5)	x(6)	7 519	6 422	x(11)	x(12)	x(11)	x(12)	4 430	3 333
Netherlands	15 216	14 443	25 054	16 341	24 874	16 306	13 312	12 599	18 608	11 603	18 511	11 621
New Zealand	11 890	11 890	19 875	13 786	18 729	13 514	8 589	8 589	11 921	8 078	11 444	8 151
Norway	22 851	22 851	30 170	19 150	29 917	19 278	18 483	18 483	27 571	17 881	27 256	17 902
Poland	2 615	2 615	15 907	10 353	15 897	10 348	2 332	2 332	12 566	8 111	12 558	8 107
Portugal	9 225	9 225	14 398	9 894	14 155	9 863	5 740	5 740	8 151	4 499	8 038	4 557
Slovak Republic	12 001	12 001	19 290	14 252	19 178	14 217	10 666	10 666	15 313	10 619	15 241	10 620
Slovenia	10 036	10 036	22 464	17 689	21 127	16 865	6 152	6 152	18 521	14 802	17 189	13 871
Spain	12 878	12 878	18 369	12 689	17 124	12 732	10 502	10 502	12 104	7 207	11 741	7 954
Sweden	8 231	8 231	31 503	14 898	28 823	14 130	8 231	8 231	26 102	13 494	24 044	12 888
Switzerland	m	m	m	m	m	m	x(11)	x(12)	x(11)	x(12)	32 505	15 569
Türkiye	x(5)	x(6)	x(5)	x(6)	10 825	7 119	x(11)	x(12)	x(11)	x(12)	7 698	5 344
United Kingdom	32 170	28 443	35 545	28 781	35 350	28 762	9 622	7 172	7 790	3 343	7 896	3 565
United States[3]	x(5)	x(6)	x(5)	x(6)	36 274	31 610	x(11)	x(12)	x(11)	x(12)	14 046	11 245
OECD average	14 603	13 735	22 828	14 649	21 444	14 512	10 078	9 919	15 797	9 746	15 102	9 904
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	3 329	m
Brazil	x(5)	x(6)	x(5)	x(6)	3 765	3 328	x(11)	x(12)	x(11)	x(12)	3 765	3 328
Bulgaria	a	a	12 680	12 104	12 680	12 104	a	a	8 198	7 891	8 198	7 891
China	x(5)	m	x(5)	m	7 157	m	x(11)	m	x(11)	m	4 256	m
Croatia	x(5)	m	x(5)	m	11 429	m	x(11)	m	x(11)	m	8 559	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	x(5)	x(6)	x(5)	x(6)	3 641	3 615	x(11)	x(12)	x(11)	x(12)	1 420	1 396
Romania	a	a	11 466	11 454	11 466	11 454	a	a	10 329	10 317	10 329	10 317
Saudi Arabia[3]	m	m	m	m	m	m	m	m	m	m	2 844	m
South Africa	x(5)	m	x(5)	m	15 726	m	x(11)	m	x(11)	m	11 504	m
EU25 average	13 927	13 853	21 486	13 652	20 574	13 836	10 929	10 861	16 816	10 611	15 830	10 489
G20 average	m	m	m	m	18 947	m	m	m	m	m	8 775	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table C5.2. Change in total expenditure on tertiary institutions (2015 to 2022)

Constant prices (2020=100), by level of education

	Short-cycle tertiary (including R&D)				Bachelor's, master's and doctoral or equivalent (including R&D)			
	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in the percentage of initial expenditure from government sources	Change in expenditure on educational institutions per student	Change in the number of students	Change in expenditure on educational institutions	Change in the percentage of initial expenditure from government sources
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	m	m	m	m	m	m	m	m
Austria	0	-6	-6	0	14	4	19	-7
Belgium	7	33	43	-5	10	9	20	-2
Canada	-15	32	12	m	-3	10	7	m
Chile[1]	14[d]	-12[d]	0[d]	m	32[d]	13[d]	50[d]	m
Colombia	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m
Czechia	26	8	36	3	19	-11	6	14
Denmark	m	m	m	m	m	m	m	m
Estonia	m	m	m	m	9	-16	-9	5
Finland	a	a	a	a	-14	12	-3	m
France	18	15	35	-41	-3	23	20	-6
Germany	m	m	m	m	3	10	13	m
Greece	m	m	m	m	7	25	34	m
Hungary	332	-5	311	m	79	-4	72	m
Iceland	66	51	151	m	16	13	31	m
Ireland	m	-11	m	m	m	16	m	m
Israel	7	16	25	m	13	12	26	m
Italy	-34	321	175	9	-4	18	13	3
Japan[2]	3	-6	-3	m	1	3	4	m
Korea	16	-28	-16	m	21	-10	9	m
Latvia	-14	-15	-27	m	-9	-10	-18	m
Lithuania	m	m	m	m	24	-23	-4	8
Luxembourg	-65	32	-54	2	0	8	9	-3
Mexico	m	-5	m	m	m	38	m	m
Netherlands	7	421	459	m	-4	17	13	m
New Zealand	17	-40	-29	43	-5	-5	-10	3
Norway	-1	23	22	-2	1	17	19	-5
Poland	-87	-57	-95	-11	31	-17	8	-3
Portugal	m	m	m	m	-7	16	8	-2
Slovak Republic	23	-21	-3	4	2	-18	-17	m
Slovenia	139	-21	89	m	50	-5	43	m
Spain	7	32	41	-8	3	13	16	3
Sweden	-5	74	64	0	-5	11	5	-2
Switzerland	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m
United Kingdom	192	-14	150	91	-3	26	22	-18
United States	m	m	m	m	m	m	m	m
OECD average	28	33	60	m	10	6	14	m
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	31	-17	8	39
China	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m
Romania	m	m	m	m	13	2	15	17
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m
EU25 average	m	53	m	m	11	3	12	m
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table C5.3. Annual average (or most common) tuition fees charged by tertiary institutions to national and foreign students (2022/23)

In equivalent USD converted using PPPs, for full-time students, by type of institutions and level of education

	Share of full-time and part-time master's students who are enrolled in independent private institutions		Annual average (or most common) tuition fees charged for master's or equivalent programmes								Annual average (or most common) tuition fees charged to national students for other tertiary programmes for national students					
			Public institutions				Independent private institutions				Public institutions			Independent private institutions		
	2012/2013	2022/2023	Average (or most common) tuition fees for national students	Minimum tuition fees for national students	Maximum tuition fees for national students	Average tuition fees for foreign students	Average (or most common) tuition fees for national students	Minimum tuition fees for national students	Maximum tuition fees for national students	Average tuition fees for foreign students	Short-cycle tertiary	Bachelor's	Doctoral	Short-cycle tertiary	Bachelor's	Doctoral
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia[1, 2]	5	13	9 496	1 393	22 746	20 880	16 057	4 443	33 960	10 431	3 857	5 108	196	9 368	10 978	5 453
Austria	m	m	1 043	m	m	2 085	m	m	m	m	m	1 043	1 043	m	m	m
Canada	a	a	9 564	1 636	100 471	20 876	a	a	a	a	a	5 590	5 983	a	a	a
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	a	a	0	0	0	Between USD 8 000 and USD 21 000	a	a	a	a	0	0	0	a	a	a
Estonia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Finland[3]	8	24	0	0	0	14 292	0	0	0	9 615	a	0	0	a	0	0
France	22	32	360	m	3 708	5 592	m	m	m	m	0	252	564	m	m	m
Germany[1, 2]	6	13	157[d]	m	m	x(3)	5 509[d]	m	m	x(7)	m	x(3)	x(3)	m	x(7)	x(7)
Greece	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	14	18	4 174	4 174	4 174	m	10 368	3 348	29 634	m	2 119	3 088		m	9 040	a
Italy	8	18	2 864	336	4 909	2 864	8 132	2 518	21 153	8 132	a	2 570	547	m	6 463	2 730
Japan	53	52	5 647	m	m	5 647	8 808	m	m	8 808	3 975	5 645	5 647	7 680	10 104	6 368
Korea	69	70	6 630	4 230	11 025	m	12 429	4 408	57 127	m	2 900	5 132	7 718	7 432	9 209	13 549
Latvia[4]	8	15	6 782	141	60 377	20 071	6 738	865	35 220	5 993	3 566	4 824	4 558	4 683	5 635	4 174
Lithuania	5	6	13 234	857	35 555	m	11 216	857	41 542	m	5 428	5 458	20 069		5 141	16 842
Luxembourg	0	0	494	494	14 805	494	a	a	a	a	494	494	494	a	a	a
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	m	m	3 041	3 041	27 145	20 328	m	m	m	m	3 041	3 041	a	m	m	a
New Zealand[3]	3	6	6 124	2 340	20 093	22 363	5 918	4 610	21 262	15 482	3 372	4 748	5 161	5 092	4 541	a
Norway	3	3	0	0	0	0	5 538[d]	m	m	5 538	552	0	0	9 384	x(7)	a
Poland[2]	26	34	8 142	1 119	44 588	5 195	4 774	2 182	38 688	4 966	m	7 497	m	m	4 487	m
Portugal	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Spain[1]	15	39	2 447	1 000	22 844	2 447	13 930	m	m	13 930	0	1 708	m	m	12 693	m
Sweden[3]	8	8	0	0	0	m	0	0	0	m	0	0	0	0	0	0
Switzerland	3	3	1 427	611	2 446	3 159	m	m	m	m	a	1 427	408	m	m	m
Türkiye[1]	15	18	0	0	0	m	m	m	m	m	0	0	0	m	m	m
United States[1, 5]	54	53	12 596[d]	9 292	14 814	20 328	28 017[d]	13 510[d]	42 128[d]	28 017[d]	3 564	9 596	x(3)	16 579	34 041	x(7)
Other economies																
Flemish Comm. (Belgium)	1	0	1 410	167	1 410	m	a	a	a	a	1 410	1 410	m	a	a	a
French Comm. (Belgium)	1	0	753[d]	0[d]	1 202[d]	m	a	a	a	m	x(12)	433[d]	x(3)	a	a	a
England (UK)[1, 4]	a	a	m	m	m	m	m	m	m	m	x(12)	13 135[d]	m	m	m	m
Partner and/or accession countries																
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	4	6	1 657[d]	1 174	2 379	m	m	m	m	m	a	1 660	x(3)	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	10	9	2 098	1 168	5 842	8 150	2 943	1 220	21 907	8 631	a	2 163	3 584	a	2 642	a
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table C5.4. Public financial support for students enrolled in tertiary programmes (2012/13 and 2022/23) and types and eligibility of public grants/scholarships (2022/23)

	2022/23 distribution of tertiary students receiving:						Types of scholarships/grants awarded				Are the following categories of students eligible for a public grant/scholarship:		
	Public or government-guaranteed private loans only	Public grants/scholarships only	Public grants/scholarships and public or government-guaranteed private loans	Neither public grants/scholarships nor public / government-guaranteed private loans	Share of tertiary students receiving public grants/ scholarships and/or public or government-guaranteed private loans in 2012/13	Average annual amount of public grants/ scholarships in 2022/23, in USD converted using PPPs	Universal grants	Means-tested grants	Merit-based	Targeted on disadvantaged population group	Students enrolled part time	Students enrolled exclusively on line	Students enrolled in blended learning
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Australia[1]	40	0	41	20	m	7 273	no	no	yes	no	yes	yes	yes
Austria[1]	a	16	a	84	15	9 073	no	yes	yes	no	a	yes	no
Canada	x(3)	x(3)	39	61	33	5 823	no	yes	yes	yes	yes	yes	yes
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	m	m	m	m	m	m	m	m	m	m	m	m	m
Denmark	0	66	18	15	m	9 230	yes	no	no	no	no	no	no
Estonia	m	m	m	m	m	m	m	m	m	m	m	m	m
Finland	x(3)	x(3)	56	44	52	2 537	yes	no	no	no	no	yes	yes
France[1, 2]	1	33	m	66	m	2 741	no	yes	yes	no	yes	yes	no
Germany[1]	x(3)	x(3)	21	79	25	5 384	no	yes	yes	no	no	yes	yes
Greece	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	m	m	m	m	m	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	m	m	m	m	m	m	no	yes	yes	yes	yes	yes	yes
Italy	0	45	0	55	20	9 715	no	yes	yes	yes	yes	yes	yes
Japan	m	m	m	m	m	4 706	no	yes	yes	no	yes	yes	yes
Korea	m	m	m	m	m	3 443	no	yes	yes	yes	no	yes	yes
Latvia[3]	8	46	1	43	m	2 818	no	no	yes	no	no	no	yes
Lithuania	5	57	0	38	54	a	yes	yes	yes	yes	no	yes	yes
Luxembourg	x(3)	x(3)	90	10	m	5 264	yes	yes	no	no	yes	yes	yes
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	m	m	m	m	m	5 067	yes	yes	no	no	no	yes	yes
New Zealand	46	4	23	27	88	8 006	no	yes	yes	no	no	yes	yes
Norway	8	2	62	28	m	5 484	yes	yes	no	no	yes	yes	yes
Poland	a	16	a	84	21	m	no	yes	yes	yes	yes	no	yes
Portugal	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia	m	m	m	m	m	m	m	m	m	m	m	m	m
Spain[1]	a	40	a	60	33	m	no	yes	no	no	yes	yes	yes
Sweden	0	13	78	9	91	3 724	yes	no	no	no	yes	yes	yes
Switzerland	1	9	1	90	15	9 263	no	yes	no	no	yes	yes	yes
Türkiye[1]	x(3)	x(3)	97	3	m	5 000	no	yes	yes	yes	a	no	yes
United States[1]	7	35	38	20	82	2 202	no	yes	yes	yes	yes	yes	yes
Other economies													
Flemish Comm. (Belgium)	a	20	a	80	18	2 864	no	yes	yes	no	yes	yes	yes
French Comm. (Belgium)	a	22	a	78	20	m	m	m	m	m	m	m	m
England (UK)[1, 3]	93	0	0	7	84	m	no	yes	no	yes	yes	yes	yes
Partner and/or accession countries													
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	a	11	a	89	m	m	yes	yes	yes	yes	no	yes	yes
India	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania[2]	a	37	0	63	m	434	no	yes	yes	yes	no	no	no
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Part D. Teachers, the learning environment and the organisation of schools

Chapter D1. How much time do students spend in the classroom?

Highlights

- Students in OECD countries and economies receive an average of 7 604 hours of compulsory instruction during their primary and lower secondary education, ranging from 5 304 hours in Poland to double that in Australia (11 000 hours).
- Across OECD countries and economies, compulsory instruction time for primary students averages 804 hours per year, while lower secondary students receive an average of 105 more hours of compulsory education per year (909 hours).
- On average across OECD countries and economies, instruction in reading, writing and literature and in mathematics represents 41% of compulsory instruction time for primary school students, but only 27% of compulsory instruction time for lower secondary school students.

Context

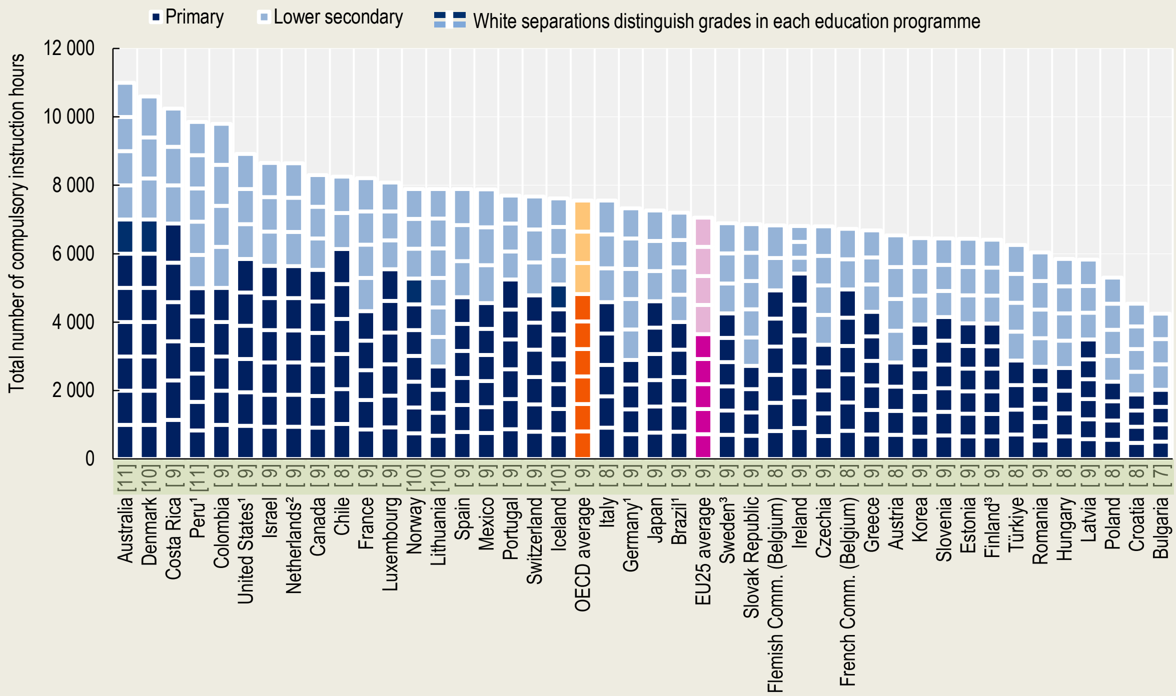
Providing instruction in formal classroom settings accounts for a large portion of public investment in education. Countries make various choices about the overall amount of time devoted to instruction and which subjects are compulsory. These choices reflect national and/or regional priorities and preferences concerning what material students should be taught and at what age. Almost all countries have statutory or regulatory requirements regarding hours of instruction. These are most often stipulated as the minimum number of hours of instruction a school must offer and are based on the understanding that sufficient time is required for good learning outcomes.

Matching resources with students' needs and making optimal use of time are central to education policy. Teachers' salaries, institutional maintenance and the provision of other educational resources constitute the main costs of education. The length of instruction time (as partly covered in this chapter) is an important factor in determining how funds for education are allocated [see factors influencing the salary cost of teachers per student in Chapter D4, and the allocation of funding to schools in Chapter D6 in OECD (2021[1])].

There is growing awareness of the importance of time spent outside the classroom during the school day in activities other than instruction, including recesses and breaks. In addition to formal instruction time, students may participate in extracurricular activities before and/or after the school day or during school holidays, but these activities (as well as examination periods) are outside the scope of this chapter. For information about the relationship between instruction time and time dedicated to homework see OECD (2023[2]; 2014[3]).

Figure D1.1. Compulsory instruction time in general education (2025)

In hours, in primary and lower secondary education, in public institutions



Note: In this figure instruction hours for each grade refer to average hours per grade for the level of education. Numbers in square brackets refer to the total number of years for primary and lower secondary education.
1. Year of reference: 2024.
2. The number of grades in lower secondary education is three or four, depending on the track. The fourth year of pre-vocational secondary education was excluded from the calculation.
3. Estimated number of hours by level of education based on the average number of hours per year, as for some subjects, the allocation of instruction time across multiple levels is flexible.
For data, see Table D1.1. For a link to download the data, see Tables and Notes section.

Other findings

- Primary education lasts six years on average across OECD countries and economies, ranging from four to seven years. Lower secondary education lasts three years on average across OECD countries and economies, ranging from two to six years. In three out of five OECD and partner countries and economies, at least one year of upper secondary education is part of compulsory full-time general education.
- On average across OECD countries and economies, the number of instruction days per year is similar at primary (186 days), lower secondary (184 days) and upper secondary levels (183 days). The difference in the number of instruction days per year between primary and lower secondary levels is less than two days in most countries, but is ten days (two weeks) or more in Bulgaria, Ireland, Lithuania, and Luxembourg.
- An average of 1% of compulsory instruction time for primary students and lower secondary students is devoted to compulsory subjects with a flexible timetable in OECD countries and economies (excluding a few countries where the compulsory curriculum is mostly devoted to subjects with a flexible timetable). An average of 3% of compulsory instruction time both at the primary level and at the lower secondary level is devoted to flexible subjects chosen by schools.

- In more than one-quarter of countries with available data, the allocation of instruction time across grades is flexible, with the instruction time for a specific subject defined for a certain number of grades or even the whole of compulsory education, without specifying how much time is to be allocated to each grade.

Analysis

Compulsory general education

Both annual instruction time and the length of compulsory education have an impact on the total instruction time during compulsory education. In some countries, the duration of compulsory education is shorter and students face a heavier annual workload to meet on statutory requirements. In other countries, the workload is distributed over more years. This chapter focuses on compulsory education at primary and lower secondary levels (in public institutions). However, in 23 OECD and partner countries, at least one year of pre-primary education is also compulsory, so the starting age for compulsory education is below the age at which primary education starts (see Figure D.D1.1 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en) for more details on the number of years of compulsory education). Moreover, in around three-fifths of countries and economies with available data, at least one year of upper secondary education is part of compulsory full-time education (Table D1.1).

In nearly three out of four countries and economies with available data, students are required to start primary education at the age of 6. In most other countries, students are not required to start until they are 7 (in Bulgaria, Croatia, Estonia, Finland, Latvia, Lithuania, Poland and Sweden). Only in Australia, England (United Kingdom), New Zealand and Scotland (United Kingdom) does start primary education at age 5 (Table D1.2).

There is also substantial variation in the duration of primary education. On average across OECD countries and economies, primary education lasts six years, but it ranges from four years in Austria, Bulgaria, Croatia, Germany, Hungary, Lithuania, Poland, the Slovak Republic and the Republic of Türkiye to seven years in Australia, Denmark, Iceland, Norway and Scotland (United Kingdom). Compulsory lower secondary education averages three years, but ranges from two years in Chile and the Flemish and French Communities of Belgium to five years in Germany, Peru and the Slovak Republic, and six years in Lithuania (Table D1.2). However, the number of grades allocated to each level of compulsory education may differ within countries, across subnational entities, for example in federal countries such as the United States (Box D1.2).

Countries allocate annual instruction time differently over the year. The number of instruction days and the way they are distributed across the school year can vary significantly between countries, as countries organise holidays differently (Box D1.1). The distribution of instruction time during the week also varies between countries. For example, whereas students go to primary and lower secondary school five days per week in nearly all countries, in Belgium and France, students typically do not go to school one half-day, usually on Wednesday afternoon (see Box D1.2 in OECD (2019[4])). Countries also vary in the way they organise recess and breaks within the school day (see Box D1.2 in OECD (2018[5])).

Box D1.1. Organisation of breaks within the school year in primary education (2025)

The length of the school year varies greatly between countries, implying that there is also wide variation in the number of weeks students are not at school across countries. Countries organise the school year in different ways, in terms of the frequency and length of school breaks during the school year.

In about three-quarters of the 40 OECD countries and economies, the total length of school breaks is harmonised for the whole country, and ranges from less than 12 weeks in Costa Rica to more than 18 weeks in Latvia, with an average of 13 weeks. However, the distribution of breaks during the school year can be flexible across subnational entities. For example, dates for school breaks are defined according to three zones in France, and there is similar flexibility in Austria, the Netherlands, Poland, the Slovak Republic and Slovenia (see Figure D.D1.2 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en) for the organisation of the school year at primary level).

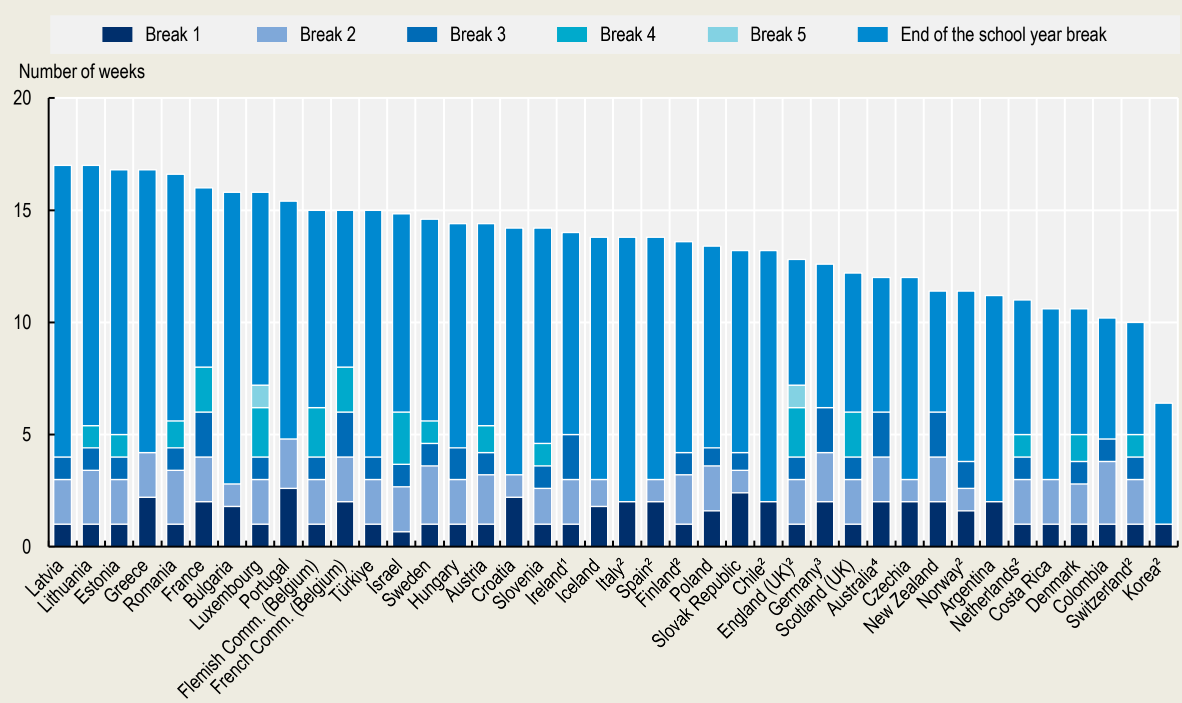
In the remaining one-quarter of countries and economies, the total length and the distribution of school breaks can differ between subnational entities (especially in federal countries) and/or individual schools (e.g. in Italy), even if decisions related to these school breaks need to be taken following some higher-level guidelines. For example, schools in Italy autonomously organise school breaks under regional guidelines.

In all countries, the longest break is the one between two successive school years. This break ranges from 3 weeks in some cantons in Switzerland to 12 weeks or more in Bulgaria, Chile (in some subnational entities due to specific climatic conditions), Greece, Italy and Latvia. In nearly all countries with available information, this break between two school years represents at least half of the school holiday time (Figure D1.2).

In addition to this long break, students usually have two to four other shorter holiday periods during the school year. England (United Kingdom) and Luxembourg as well as some Länder in Germany and some Canton in Switzerland offer a fifth break (Figure D1.2).

Figure D1.2. School breaks in compulsory primary education (2025)

In weeks, in public institutions



Note: Breaks exclude public/religious days, except if these days are included in longer breaks.
1. End-of-year break includes examination periods.
2. Minimum length of breaks. Length of breaks may vary by region, by programme and/or by individual school.
3. Data for the federal state with the highest number of pupils, Nordrhein-Westfalen. The length and number of breaks for Germany are indicative due to variation across Länder, even if the total duration of breaks is similar across the Länder.
4. Length of breaks may vary by region.
For a link to download the data, see Tables and Notes section.

Breaks during the school year differ in both length and timing, but the end of calendar year is the main common break period, corresponding to either an approximately two-week break (in the northern hemisphere) or the end of the school year break in the southern hemisphere.

In most countries, the length of the different breaks within the school year varies, from a few days to more than two weeks. Exceptions to this pattern are France, the French Community of Belgium and New Zealand with consistent two-week breaks. Several countries and economies (the Flemish Community of Belgium, Czechia, Costa Rica, England [United Kingdom], Estonia, Ireland, Latvia, Luxembourg, the Netherlands, Scotland [United Kingdom] and Türkiye) alternate one-week and two-week breaks during the school year (Figure D1.2).

In most countries, the organisation of breaks is usually similar at primary and lower secondary levels. However, breaks at the end of the school year are shorter at lower secondary level than at primary level by two weeks in Lithuania. In contrast, they are about two weeks longer than at primary level in Portugal and four weeks longer in Ireland (see Figure D.D1.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en) for the organisation of school year at the lower secondary level).

Intended instruction time

Intended instruction time is the total number of hours during which schools are obliged to offer instruction in compulsory and, if applicable, non-compulsory subjects. However, intended instruction time can be different from actual instruction time.

In most countries, the total statutory number of hours of intended and/or compulsory instruction time is defined at the national level (i.e. uniform across the country). The total statutory number of hours of intended and/or compulsory instruction time are defined at the subnational level in some federal countries (e.g. Belgium, Canada, Germany and the United States) and in some countries with a decentralised education system (e.g. Spain and the United Kingdom) (Box D1.2).

Box D1.2. Subnational variation in instruction time at the primary and lower secondary levels

Even if all children within a country are enrolled in compulsory education for the same number of years, they do not necessarily receive the same amount of instruction time across the country. Subnational data provided by five countries (for 2025 for Belgium, Spain and the United Kingdom, 2024 for Canada, and 2023 for the United States) show how instruction time can vary significantly across subnational entities within a single country.

In four of these countries, the number of grades in primary and lower secondary education is the same for all subnational entities (Belgium, Canada, Spain and the United States). In the United Kingdom, the total number of grades at the primary and lower secondary levels differs by one year between England and Scotland. Primary education ranges from six years (in England) to seven years (in Scotland), while lower secondary is three years for both. As the number of grades of compulsory education at upper secondary level also varies between 1 and 2 years, the total length of compulsory education is 11 years in both.

Despite the similar number of grades at the subnational level in most countries, the number of compulsory instruction hours varies at the subnational level to different degrees. At the primary level, the number of compulsory instruction hours per year varies by less than 1% in Belgium (from 821 hours in the Flemish Community to 826 hours in the French Community), by 4% in Spain (from 788 hours in most subnational entities to 823 hours in the *Comunidad Foral de Navarra*) and by 75% in the United States (from an estimated minimum of 720 hours in New Jersey to 1 260 hours in Texas). In Canada, the number of intended instruction hours (compulsory and non-compulsory instruction time) varies by 14% at the primary level (from 837 hours in Nova Scotia to 950 hours in Alberta and Saskatchewan). These variations can add up to significant differences in the total number of hours of instruction over the whole course of primary education. Variations range from a total difference of 28 hours of compulsory instruction between the French and Flemish Communities in Belgium to 210 hours in Spain and 3 240 hours in the United States. In Canada, the difference in intended instruction time at the primary level reaches 680 hours.

The differences are similar at the lower secondary level: the annual number of compulsory instruction hours varies by about 2% in Spain, 7% in Belgium and 75% in the United States. Differences in the total number of compulsory instruction hours at the lower secondary level between subnational entities range from 70 hours in Spain to 129 hours in Belgium and 1 620 hours in the United States. In Canada, the number of intended instruction hours varies by about 6% (168 hours) between the different provinces at the lower secondary level.

The extent of these variations may reflect differences in the number of annual days of instruction at both the primary and lower secondary levels, except in Spain, where the number of instruction days does not vary across subnational entities. The annual number of instruction days at the primary level varied by 1% in Belgium (1 day, from 176 days in the Flemish Community to 177 days in the French Community), 6% in Canada (10 days, from 180 days in Quebec to 190 days in Saskatchewan) and 16% in the United States (26 days, from 160 days in Colorado to 186 days in Kansas). Similar differences are found at the lower secondary level.

Source: Education at a Glance Database, https://data-explorer.oecd.org/.

Instruction may also occur outside compulsory school hours and outside the classroom or school, which is not covered in this chapter. In some countries, lower secondary school students are encouraged to take after-school classes in subjects already taught in school to help them improve their performance. Students can participate in after-school lessons in the form of remedial catch-up classes or enrichment courses, with individual tutors or in group lessons provided by school teachers, or in other independent courses (see Box D1.2 in OECD (2017[6]) and notes on the organisation of the school day in *Education at a Glance 2025 Sources, Methodologies and Technical* (https://doi.org/10.1787/fcfaf2d1-en) for more information).

Compulsory instruction time

Compulsory instruction time refers to the amount and allocation of instruction time that must be provided in almost every public school and must be attended by almost all public sector students, in line with public regulations.

Across OECD countries and economies, total compulsory instruction time in primary and lower secondary general education averages 7 604 hours spanning across 9 years on average. This ranges from 5 304 hours in Poland (over 8 years) to 11 000 hours in Australia (over 11 years) (Figure D1.1). In England (United Kingdom), New Zealand and Scotland (United Kingdom), the regulations do not prescribe compulsory instruction time in schools. However, schools are required to be open for instruction for a minimum number of hours per day (New Zealand) or to allow sufficient instruction time to deliver a broad and balanced curriculum that includes all statutory requirements (England and Scotland [United Kingdom]).

Breaking it down by level, on average across OECD countries and economies, students receive 4 560 hours of compulsory instruction over 6 years of primary education and 3 044 hours during 3 years of lower secondary general education. The average annual number of compulsory instruction hours tends to increase with level of education in most countries (from 804 hours in primary education to 909 hours in lower secondary general programmes on average across OECD countries and economies), except in Costa Rica (where there is a 2% decrease in hours between primary and lower secondary), Luxembourg (9% decrease) and Portugal (6% decrease). The especially large reduction of compulsory instruction hours per year in Ireland (48% decrease from 903 hours at primary level to 465 hours at lower secondary), is the result of a recent reform reducing the minimum instruction time devoted to different subjects and providing schools with a great degree of flexibility to design the learning programme at the lower secondary level (Table D1.1).

Compulsory instruction time per year generally increases with age, averaging 779 hours at age 7, 843 hours at age 10, then 916 hours at age 13. In Bulgaria, Croatia, Czechia, Korea, Latvia, Mexico, Poland and Romania, the average annual number of compulsory instruction hours increases by more than 40% between ages 7 and 13 (Table D1.5, available on line).

Compulsory instruction time, by definition, only captures the time spent by students in formal classroom settings (as established in public regulations). It does not show the actual number of hours of instruction that students receive and does not cover learning outside the formal classroom setting. In addition, compulsory instruction time does not always reflect the evolving demand of societies, such as rapid technological transformation. Education systems are increasingly expected to equip students for the future, like essential digital competences (see Box D1.3).

Box D1.3. Preparing students for the future: Digital competence in the compulsory curriculum

Modern society is transforming rapidly with the development and use of innovative technologies. Countries adapt their education systems and their curricula to technological evolution to ensure they are giving students essential skills to prepare them for this digital transformation and to succeed in the future. Schools progressively integrate digital competence (which encompasses a set of skills, knowledge and attitudes) into the curriculum, for example with digital literacy, coding, and the effective use of digital tools for learning and teaching. However, the definition of digital competence and how it is implemented in compulsory education differ across countries (OECD, 2023[7]; EACEA: Eurydice, 2019[8]; EACEA: Eurydice, 2023[9]).

Digital competence can be taught in three ways: 1) as a separate subject in the curriculum (as a compulsory or optional subject); 2) integrated with specific subjects of instruction (components of digital competence are then integrated within a compulsory subject); or 3) as a cross-curricular subject (defined as transversal and therefore integrated along with all compulsory subjects, teachers being responsible for developing it). In nearly two-thirds of European countries the cross-curricular approach is implemented in primary education and in more than half of these countries it is also implemented in secondary education. Nevertheless, it is common for European education systems to combine two of these curriculum approaches, and in one-third of these systems, all three approaches are integrated in at least one level of education (EACEA: Eurydice, 2023[9]).

Czechia is one country combining the three approaches for teaching digital competences. Recent reforms to implement the new informatics curriculum at the primary level (since 2023) and at the lower secondary level (in the 2024/25 school year), make informatics a separate compulsory subject from the fourth to ninth grade. Many other European countries have been undertaking similar reforms to integrate digital competence into their education system (EACEA: Eurydice, 2023[9]). In addition to these reforms, 26 OECD countries and economies, as well as Brazil, have established rules or guidelines to incorporate digital competence as a transversal competence within the curriculum (these being applied mostly to all levels of education) (OECD, 2023[7]).

However, to ensure that students are efficiently prepared to develop digital competences, teachers need to be sufficiently trained in this area. A recent OECD survey has raised concerns about the gap between teachers' actual training and classroom practices. Creating a wider ecosystem approach would be beneficial to ensure the equitable development of students and teachers in digital competences. Providing support and professional development to teachers would also help students to better adapt and effectively face the technological evolution to come (OECD, 2023[7]; EACEA: Eurydice, 2023[9]).

Non-compulsory instruction time

In about three out of five countries and economies with available data, there is no non-compulsory instruction time, so intended and compulsory instruction time are the same (i.e. intended instruction time is fully compulsory) for primary and lower secondary students. In the remaining countries and economies, intended instruction time includes both compulsory instruction time and a specified amount of non-compulsory instruction time (which must be provided in almost every public school, but which is not mandatory for almost all students in public schools): eight countries at primary level and nine at lower secondary level (Table D1.1).

Among countries with available data, non-compulsory instruction time is equivalent to more than 20% of compulsory instruction time in a few countries. At the primary level, non-compulsory time is equivalent to 20% of total compulsory instruction time in Slovenia, 25% in Croatia and 53% in Greece. At the lower secondary level, non-compulsory time is equivalent to 20% in Croatia, about 22% of total compulsory instruction time in France, 23% in Slovenia and 30% in Greece (Table D1.3 and Table D1.4). However, these values need to be interpreted with caution. In France, for example, lower secondary students are offered a wide variety of courses in the non-compulsory curriculum, and they could not physically attend all the subjects and hours available.

Instruction time per subject

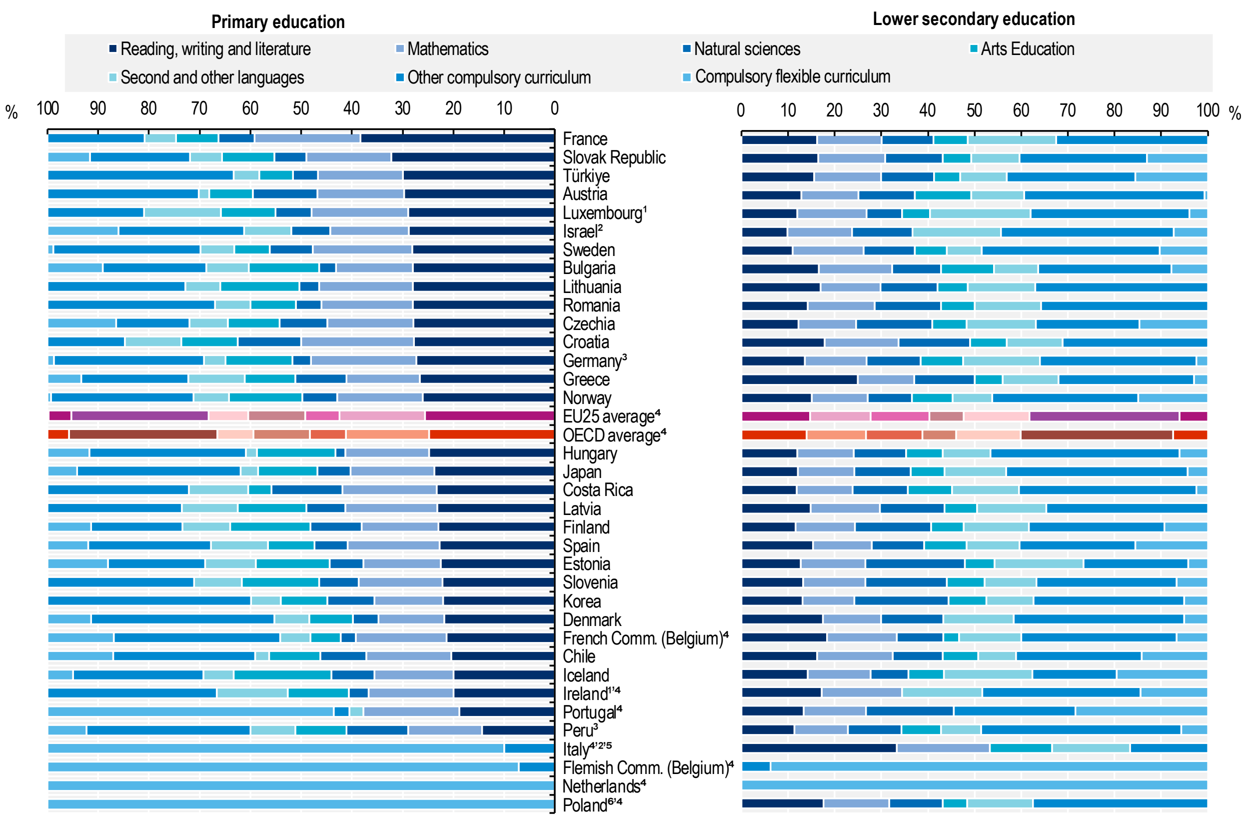
On average across OECD countries and economies, 41% of the compulsory instruction time at primary level is devoted to providing students with fundamental skills in literacy and numeracy: 25% on reading, writing and literature and 16% on mathematics. In Croatia and France, at least half of compulsory instruction time is allocated to reading, writing and literature (first language) and mathematics (Ireland and Luxembourg could also be included in the list as instruction time on second language includes other national languages). Together with arts (11%), physical education and health (10%), natural sciences (7%), second and other languages (7%), and social sciences (6%), these seven study areas form more than 80% of compulsory instruction time on average across OECD countries and economies where instruction time per subject is specified (Table D1.3 and Figure D1.3).

Religion, ethics and moral education; information and communication technologies (ICT); technology; practical and vocational skills; and other subjects make up the remainder of the non-flexible compulsory curriculum at the primary level, representing about 13% of the compulsory instruction time on average across the OECD (Table D1.3).

At the lower secondary level, the seven major study areas at the primary level continue to take up the major part of the compulsory curriculum (79%), but as the curriculum generally becomes more subject specific the way this time is allocated changes significantly. On average across the OECD countries and economies where instruction time per subject is specified, reading, writing and literature (14%) and mathematics (13%) make up 27% of the compulsory curriculum, 14 percentage points lower than that in primary education. The shares allocated to physical education and health (8%) and to the arts (7%) are also lower than at the primary level. Conversely, the proportions of compulsory instruction time devoted to natural sciences climbs from 7% to 12%, to social sciences from 6% to 11%, and to second and other languages from 7% to 14%. Religion, ethics and moral education; ICT; technology; practical and vocational skills; and other subjects make up the remainder of the non-flexible compulsory curriculum for lower secondary students (about 13% of the total compulsory instruction time) (Figure D1.3, and Table D1.3 and Table D1.4).

Figure D1.3. Instruction time per subject in primary and lower secondary education (2025)

Percentage of total compulsory instruction time, in public institutions



Note: Some subject categories include subjects in different categories. See source table for details.
1. The second language of instruction includes other national languages taught.
2. Reading, writing and literature includes social sciences (at primary level in Israel, at lower secondary level in Italy).
3. Year of reference: 2024.
4. The Flemish Community of Belgium, the French Community of Belgium, Ireland (lower secondary), Italy (primary), the Netherlands, Poland (primary) and Portugal (primary) are not included in the averages.
5. Mathematics includes natural sciences.
6. Excludes the last year of primary education (first four years of primary school) for which the instruction time is allocated to specific compulsory subjects.
For data, see Table D1.3 and Table D1.4. For a link to download the data, see Tables and Notes section.

At the lower secondary level, there is substantial variation in how countries allocate time to the different subjects within the compulsory curriculum. For example, reading, writing and literature account for 12% or less of compulsory instruction time in Costa Rica, Czechia, Finland, Hungary, Israel, Japan, Luxembourg, Peru and Sweden but more than 25% of compulsory instruction time in Greece and Italy (in Italy, this also includes time devoted to social sciences). In Ireland, reading, writing and literature are taught in two national languages and therefore the combined instruction time for the two languages reaches around 17% of the total compulsory instruction time. Natural sciences account for 10% or less of compulsory instruction time in the French Community of Belgium, Iceland, Luxembourg and Norway, but 20% or more of compulsory instruction time in Estonia and Korea (in Korea, this also includes time devoted to ICT, technology, and practical and vocational skills). Compulsory instruction time devoted to second and other languages also varies widely between countries. Second-language instruction accounts for 7% or less of compulsory instruction time in Costa Rica, Greece and Romania and 13% or more in the French Community of Belgium, Iceland, Ireland, Japan, Latvia and Luxembourg. In addition, more than four out of ten countries with available data allocate some compulsory instruction time for lower secondary students to instruction in another language in addition to a second language (Figure D1.3, and Table D1.3 and Table D1.4).

As the difference between the primary and lower secondary levels shows, there are significant differences in how time is allocated to school subjects as students grow older. For example, on average across OECD countries, 28% of instruction time is devoted to reading, writing and literature for 7-year-olds, 19% for 11-year-olds and 12% for 15-year-olds. In contrast, while an average of 4% of instruction time for 7-year-olds is devoted to a second language, 11% of instruction time for 11-year-olds is spent studying a second language and 1% studying other languages, while for 15-year-olds, the percentages are 10% for a second language and 4% for other languages. The proportion of instruction time devoted to other subjects also changes, as explored in Table D1.6 (available on line).

Flexibility in the curriculum

In most countries and economies, central and state authorities establish regulations or recommendations regarding instruction time and the curriculum. However, local authorities, schools, teachers and/or students also have varying degrees of freedom in organising instruction time or in choosing subjects.

In at least one-quarter of countries and economies with available data, the allocation of instruction time is vertically flexible in primary and lower secondary general education, meaning that instruction time for a specific subject is defined for a certain number of grades or even the whole of compulsory education, without specifying the time to be allocated to each grade. In such cases, schools or local authorities are free to decide how much time should be allocated for each grade (Table D1.2).

In a few countries and economies, compulsory subjects are set within a horizontally flexible timetable for few or most subjects. This means that overall instruction time is defined for a certain number of compulsory subjects or even the whole of compulsory education, but the time to be allocated to each subject is not. In Portugal, more than half of the compulsory curriculum at the primary level is organised within a flexible timetable, and the share reaches 90% or more in the Flemish Community of Belgium and in Italy. In the Netherlands and Poland (in the first three grades), the entire curriculum at the primary level is organised as a flexible timetable. At the lower secondary level, similar patterns are found in the Flemish Community of Belgium and the Netherlands. In these countries and economies, local authorities, schools and/or teachers are free to decide how much time to allocate to most compulsory subjects. In Scotland (United Kingdom), at both primary and lower secondary levels, some compulsory subjects are specified, but there is no regulation on total instruction time, which is the responsibility of local authorities and schools themselves. Excluding these countries and economies, compulsory subjects with flexible timetables account for 1% of the compulsory instruction time at both primary and lower secondary levels, even if they are a significant part of the curriculum in some countries (Table D1.3 and Table D1.4).

More details on the different combinations of flexibility employed by countries, in both primary and lower secondary education, can be found in Box D1.4.

Flexibility in the choice of subjects is less common across OECD countries. On average, 3% of compulsory instruction time is allocated to subjects chosen by schools at the primary level. At the lower secondary level, 3% of compulsory instruction time is allocated to subjects chosen by schools and another 3% to subjects chosen by students. However, some countries and economies allocate a substantial part of the compulsory instruction time to flexible subjects. For example, about 10% or more of compulsory instruction time is allocated to subjects chosen by schools in Chile, Czechia, Estonia (primary), the Flemish Community of Belgium (lower secondary), Ireland (lower secondary), Israel (primary), the Slovak Republic (lower secondary) and Spain (lower secondary). In Iceland, Norway and Türkiye, 15-20% of compulsory instruction time is allocated to subjects chosen by lower secondary students (Table D1.3 and Table D1.4).

Box D1.4. Implementation of flexibility in compulsory instruction time across subjects and grades (2025)

Subjects in the compulsory curriculum may be taught as specific individual subjects in the national curriculum with a specific time allocated to them by grade, or they may be taught as part of the curriculum without a specific amount of time allocated to them. In the second case, schools or local authorities are free to decide which compulsory subjects to prioritise and how much time should be assigned to teach a specific subject by grade (horizontal flexibility), or how much time should be allocated to a specific subject in each grade when the total instruction time for this subject is only defined for a group of grades (vertical flexibility). Figure D1.4 shows the combinations of both kinds of flexibility for countries and economies with available data for both primary and secondary level.

Figure D1.4. Flexibility in compulsory instruction time across grades and subjects, in primary and lower secondary education (2025)

Primary education		Horizontal flexibility (across subjects)		
		No flexibility	Flexbility for a few subjects	Flexibility for all or most subjects
Vertical flexibility (across grades)	No flexibility	(11) French Comm. (Belgium)[1], Costa Rica, Denmark[1], France[2], Germany, Greece, Hungary, Japan, Peru, Romania, Türkiye[1]	(10) Austria, Bulgaria, Chile, Croatia[1], Ireland[1], Israel[1], Luxembourg[1], Slovak Republic, Slovenia, Spain[3]	(7) Australia, Flemish Comm. (Belgium), Brazil, Italy[1], Poland[1], Portugal[1], Switzerland
	Flexbility for a few subjects	(0)	(2) Czechia, Iceland	(1) Netherlands
	Flexibility for all or most subjects	(1) Norway[1]	(6) Estonia, Finland, Korea, Latvia, Lithuania[1], Sweden	(0)

Lower secondary education		Horizontal flexibility (across subjects)		
		No flexibility	Flexbility for a few subjects	Flexibility for all or most subjects
Vertical flexibility (across grades)	No flexibility	(11) Costa Rica, Croatia[1], France[2], Germany, Greece, Hungary, Japan, Luxembourg[1], Peru, Poland[1], Romania	(11) Austria, French Comm. (Belgium)[1], Bulgaria, Chile, Denmark[1], Italy[1], Portugal[1], Slovak Republic, Slovenia, Spain[3], Türkiye[1]	(4) Australia, Flemish Comm. (Belgium), Brazil, Switzerland
	Flexbility for a few subjects	(1) Lithuania[1]	(3) Czechia, Iceland, Ireland[1]	(1) Netherlands
	Flexibility for all or most subjects	(0)	(7) Estonia, Finland, Israel[1], Korea, Latvia, Norway[1], Sweden	(0)

Note: Instruction time is flexible either when the number of hours of instruction is defined for a group of subjects rather than for each subject (horizontal flexibility) or when it is defined for a group of grades rather than for each grade (vertical flexibility). Countries and economies are not included in the category of flexibility for a few subjects if a subject is flexible for two grades or fewer (for each level of education).
1. Primary education and lower secondary education are in different categories of flexibility.
2. Two or more subjects are taught together at the national level.
3. Some autonomous communities have vertical flexibility in all subjects.
For data, see Table D1.1, Table D1.3 and Table D1.4.

Horizontal flexibility in the distribution of instruction time across subjects is the most common practice among countries and economies, in both primary and lower secondary education. Vertical flexibility is implemented in just 10 countries and economies at primary level and 12 at lower secondary. There is no flexibility, i.e. with specific instruction time allocated for both subjects and grades, in just 11 countries and economies each at both the primary and the lower secondary level.

In most education systems, only one type of flexibility is implemented in their national curricula at the primary level: in 17 countries instruction time is defined for groups of subjects in specific grades (horizontal flexibility only), while in Norway, instruction time for specific subjects is defined for several grades (vertical flexibility only). At the primary level, instruction time is defined for a combination of both subjects and grades in only nine countries (Czechia, Estonia, Finland, Iceland, Korea, Latvia, Lithuania, the Netherlands and Sweden).

Similar patterns are observed at the lower secondary level, although there are differences in horizontal flexibility between primary and lower secondary education. For instance, in Denmark, the French Community of Belgium and Türkiye, there is no flexibility in instruction time in primary education, but there is for some groups of subjects in lower secondary education. Conversely, instruction time is flexible for some groups of subjects in primary education, but not in lower secondary education in Croatia, Luxembourg and Poland.

In a few other countries (Ireland, Israel, Lithuania and Norway), the type of flexibility used in the allocation of instruction time varies between primary and lower secondary levels. At primary level, the curricula in Ireland and Israel only offer horizontal flexibility in instruction time and the curriculum in Norway only offers vertical flexibility, while all three combine both types of flexibility (at least for a few subjects) in lower secondary education. Conversely in Lithuania, both types of flexibility are used at the primary education level, while only vertical flexibility is implemented for the definition of instruction time in lower secondary education.

Definitions

Compulsory instruction time/curriculum refers to the amount and allocation of instruction time that has to be provided in almost every public school and must be attended by almost all public sector students. The compulsory curriculum may be flexible, as local authorities, schools, teachers and/or students may have varying degrees of freedom to choose the subjects and/or the allocation of compulsory instruction time.

Compulsory flexible subjects chosen by schools refers to the total amount of compulsory instruction time indicated by the central authorities which regional authorities, local authorities, schools or teachers allocate to subjects of their choice (or subjects they chose from a list defined by central education authorities). It is compulsory for the school to offer one of these subjects, and students must attend.

Compulsory options chosen by the students refers to the total amount of instruction time in one or more subjects that students have to select (from a set of subjects that are compulsory for schools to offer) in order to cover part of their compulsory instruction time.

Compulsory subjects with a flexible timetable refers to the total amount of instruction time indicated by the central authorities for a given group of subjects which regional authorities, local authorities, schools or teachers allocate to individual subjects. There is flexibility in the time spent on a subject, but not in the subjects to be taught.

Flexible allocation of instruction time across multiple grades refers to the case where the curriculum only indicates the total instruction time for a specific subject for a certain number of grades, or even the whole of compulsory education, without specifying the time to be allocated to each grade. In such cases, schools/local authorities are free to decide how much time should be assigned for each grade.

Instruction time refers to the time a public school is expected to provide instruction to students on all the subjects integrated into the compulsory and non-compulsory curriculum, on school premises or in before-school/after-school activities that are formal parts of the compulsory programme. Instruction time excludes breaks between classes or other types of interruptions, non-compulsory time outside the school day, time dedicated to homework activities, individual tutoring or private study and examination periods (days for non-school-based examinations, e.g. national examinations).

Intended instruction time refers to the number of hours per year of the compulsory and non-compulsory part of the curriculum that students are entitled to receive in public schools. The intended curriculum can be based on regulations or standards of the central (or top-level) education authorities or may be established as a set of recommendations at the regional level.

The **non-compulsory part of the curriculum** refers to the total amount of instruction time that public schools must offer on top of the compulsory instruction time, but which is not mandatory for all students. Subjects can vary from school to school or from region to region and take the form of optional subjects. Additional activities before/after classes offered by the school are not per se part of the non-compulsory curriculum; for instance, if there is no obligation upon public schools to provide this instruction time or it is not part of the official curricula. In particular, non-compulsory education excludes morning care classes or after-school care classes, even if they are officially regulated.

Methodology

This chapter captures intended instruction time (as established in public regulations) as a measure of learning in formal classroom settings. It does not show the actual number of hours of instruction that students receive and does not cover learning outside of the formal classroom setting. Differences may exist across countries between the regulatory minimum hours of instruction and the actual hours of instruction received by students. Given such factors as school timetables, lesson cancellations and teacher absenteeism, schools may not consistently attain the regulatory minimum instruction time (see Box D1.1 in OECD (2007[10])).

This chapter also illustrates how minimum (and/or recommended) instruction hours are allocated across different curricular areas. It shows the intended net hours of instruction for those grades that are part of compulsory full-time general education. Although the data are difficult to compare among countries because of different curricular policies, they nevertheless provide an indication of how much formal instruction time is considered necessary for students to achieve the desired educational goals.

When the allocation of instruction time across grades is flexible (i.e. instruction time for a specific subject is defined for a certain number of grades, or even the whole of compulsory education, without specifying the time to be allocated to each grade), instruction time per age or level of education was estimated by assuming equal distribution of the total number of instruction hours between grades.

For more information please see the *OECD Handbook for Internationally Comparable Education Statistics* (OECD, 2018[11]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* ((https://doi.org/10.1787/fcfaf2d1-en).

Sources

Data on instruction time are from the 2024 Joint Eurydice-OECD Instruction time data collection and refer to instruction time during compulsory primary and full-time (lower and upper) secondary general education for the school year 2024/25. Data on school calendars are from the 2024 Joint Eurydice-OECD data collection on school calendars and refer to dates on holiday periods for students at primary and (lower and upper) secondary education for the school year 2024/25.

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Tables and Notes

Chapter D1 Tables

StatLink https://stat.link/hwfrl9

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D1.1. Instruction time in compulsory general education (2025)

Note: Columns showing the combined instruction time for compulsory primary and lower secondary education (i.e. Columns 15 to 18) and compulsory upper secondary education (i.e. Columns 19 to 25) are available for consultation on line.

1. Refers to full-time compulsory education and excludes pre-primary education, even if compulsory.
2. Estimated number of hours by level of education based on the average number of hours per year, as for some subjects, the allocation of instruction time across multiple levels is flexible.
3. Year of reference: 2024.
4. Excludes the last year of compulsory education, which can be classified at either the lower secondary or the upper secondary level.
5. The number of grades in lower secondary education is three or four, depending on the track. The fourth year of pre-vocational secondary education was excluded from the calculation.

Table D1.2. Organisation of compulsory general education (2025)

Note: Students go to school five days a week (six days in some schools in Israel and secondary education in Italy). In some countries, the statutory length of the school day varies within the school week. Columns showing the organisation of compulsory upper secondary education (i.e. Columns 9 to 12) are available for consultation on line.

1. Refers to full-time compulsory education and excludes pre-primary education, even if compulsory.

2. For some subjects, allocation of instruction time across multiple levels of education is flexible.
3. Year of reference: 2024.
4. Excludes the last year of compulsory education, which can be classified at either the lower secondary or the upper secondary level.
5. Flexible allocation of instruction time across three consecutive grades is applicable for grades 1, 4 and 7.
6. The number of grades in lower secondary education is three or four, depending on the track. The fourth year of pre-vocational secondary education was excluded from the calculation.

Table D1.3. Instruction time per subject in primary education (2025)

Note: The averages were adjusted to add up to 100% and do not correspond exactly to the average of each column. Please refer to Table D1.6, available on line, for instruction time per subject for each age.

1. For some subjects, allocation of instruction time across multiple levels of education is flexible.
2. Year of reference: 2024.
3. The second language of instruction includes other national languages taught.
4. The Flemish Community of Belgium, the French Community of Belgium, Italy, the Netherlands, Poland and Portugal are not included in the averages.
5. Excludes the last year of primary education (first four years of primary school) for which the instruction time is allocated to specific compulsory subjects.

Table D1.4. Instruction time per subject in general lower secondary education (2025)

Note: The averages were adjusted to add up to 100% and do not correspond exactly to the average of each column. Please refer to Table D1.6, available on line, for instruction time per subject for each age.

1. For some subjects, allocation of instruction time across multiple levels of education is flexible.
2. Year of reference: 2024.
3. The second language of instruction includes other national languages taught.
4. The Flemish Community of Belgium, the French Community of Belgium, Ireland and the Netherlands are not included in the averages.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)].

Table D1.1. Instruction time in compulsory general education[1] (2025)

By level of education, in public institutions

	Primary							Lower secondary						
	Number of grades that are part of compulsory education	Average hours per year			Total number of hours			Number of grades that are part of compulsory education	Average hours per year			Total number of hours		
		Compulsory instruction time	Non-compulsory instruction time	Intended instruction time	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time		Compulsory instruction time	Non-compulsory instruction time	Intended instruction time	Compulsory instruction time	Non-compulsory instruction time	Intended instruction time
OECD countries	(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)	(7)=(5)+(6)	(8)	(9)	(10)	(11)=(9)+(10)	(12)	(13)	(14)=(12)+(13)
Australia	7	1 000	m	m	7 000	m	m	4	1 000	m	m	4 000	m	m
Austria	4	705	m	m	2 820	m	m	4	930	m	m	3 720	m	m
Canada	6	921	m	m	5 527	m	m	3	924	m	m	2 773	m	m
Chile	6	1 023	a	1 023	6 137	a	6 137	2	1 056	a	1 056	2 111	a	2 111
Colombia	5	1 000	a	1 000	5 000	a	5 000	4	1 200	a	1 200	4 800	a	4 800
Costa Rica	6	1 147	a	1 147	6 880	a	6 880	3	1 120	a	1 120	3 360	a	3 360
Czechia	5	669	a	669	3 345	a	3 345	4	865	a	865	3 459	a	3 459
Denmark	7	1 000	a	1 000	7 000	a	7 000	3	1 200	a	1 200	3 600	a	3 600
Estonia	6	661	a	661	3 964	a	3 964	3	823	a	823	2 468	a	2 468
Finland[2]	6	660	33	693	3 962	195	4 157	3	817	87	904	2 451	261	2 712
France	5	864	a	864	4 320	a	4 320	4	973	216	1 189	3 890	864	4 754
Germany[3, 4]	4	725	a	725	2 901	a	2 901	5	886	a	886	4 432	a	4 432
Greece	6	718	380	1 099	4 310	2 282	6 591	3	791	238	1 029	2 373	715	3 088
Hungary	4	666	a	666	2 663	a	2 663	4	796	a	796	3 184	a	3 184
Iceland	7	729	a	729	5 100	a	5 100	3	839	a	839	2 516	a	2 516
Ireland	6	903	a	903	5 415	a	5 415	3	465	a	465	1 395	a	1 395
Israel	6	941	a	941	5 646	a	5 646	3	1 002	a	1 002	3 005	a	3 005
Italy	5	917	a	917	4 587	a	4 587	3	990	a	990	2 970	a	2 970
Japan	6	768	a	768	4 608	a	4 608	3	884	a	884	2 652	a	2 652
Korea	6	655	a	655	3 928	a	3 928	3	842	a	842	2 525	a	2 525
Latvia	6	583	m	m	3 498	m	m	3	778	m	m	2 334	m	m
Lithuania	4	676	53	729	2 706	210	2 916	6	864	119	983	5 186	711	5 897
Luxembourg	6	924	a	924	5 544	a	5 544	3	845	a	845	2 535	a	2 535
Mexico	6	760	a	760	4 560	a	4 560	3	1 108	a	1 108	3 325	a	3325
Netherlands[5]	6	940	a	940	5 640	a	5 640	3	1 000	a	1 000	3 000	a	3 000
New Zealand	6	m	m	m	m	m	m	4	m	m	m	m	m	m
Norway	7	753	a	753	5 272	a	5 272	3	874	a	874	2 622	a	2 622
Poland	4	564	56	620	2 255	225	2 481	4	762	64	826	3 049	257	3 306
Portugal	6	874	144	1 018	5 245	864	6 108	3	818	25	843	2 455	74	2 529
Slovak Republic	4	680	a	680	2 722	a	2 722	5	828	a	828	4 139	a	4 139
Slovenia	6	691	140	831	4 144	840	4 984	3	766	179	944	2 298	536	2 833
Spain	6	789	a	789	4 733	a	4 733	3	1 053	a	1 053	3 158	a	3 158
Sweden[2]	6	709	m	m	4 256	m	m	3	878	m	m	2 634	m	m
Switzerland	6	798	m	m	4 790	m	m	3	963	m	m	2 890	m	m
Türkiye	4	720	a	720	2 880	a	2 880	4	843	a	843	3 371	a	3 371
United States[3]	6	974	m	m	5 847	m	m	3	1 023	m	m	3 070	m	m
Other economies														
Flemish Comm. (Belgium)	6	821	a	821	4 928	a	4 928	2	949	a	949	1 899	a	1 899
French Comm. (Belgium)	6	826	a	826	4 956	a	4 956	2	885	a	885	1 770	a	1 770
England (UK)	6	m	a	m	m	a	m	3	m	a	m	m	a	m
Scotland (UK)	7	m	a	m	m	a	m	3	m	a	m	m	a	m
OECD average	6	804	m	m	4 560	m	m	3	909	m	m	3 044	m	m
Partner and/or accession countries														
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[3]	5	800	m	m	4 000	m	m	4	800	m	m	3 200	m	m
Bulgaria	4	507	81	588	2 028	325	2 353	3	740	92	832	2 219	277	2 496
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	4	473	118	591	1 890	473	2 363	4	663	131	794	2 651	525	3 176
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru[3]	6	833	a	833	4 995	a	4 995	5	971	a	971	4 856	a	4 856
Romania	5	540	a	540	2 700	a	2 700	4	834	a	834	3 335	a	3 335
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	5	730	m	m	3 903	m	m	4	851	m	m	2 991	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D1.2. Organisation of compulsory general education[1] (2025)

By level of education, in public institutions

	Primary				Lower secondary			
	Number of grades that are part of compulsory education	Theoretical starting age	Average number of instruction days per year	Flexible allocation of instruction time across multiple grades	Number of grades that are part of compulsory education	Theoretical starting age	Average number of instruction days per year	Flexible allocation of instruction time across multiple grades
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	7	5	200	No	4	12	200	No
Austria	4	6	180	No	4	10	180	No
Canada	6	6	185	No	3	12	185	No
Chile	6	6	183	No	2	12	182	No
Colombia	5	6	200	No	4	11	200	No
Costa Rica	6	6	200	No	3	12	200	No
Czechia	5	6	189	Yes	4	11	189	Yes
Denmark	7	6	200	No	3	13	200	No
Estonia	6	7	175	Yes	3	13	175	Yes
Finland[2]	6	7	187	Yes	3	13	187	Yes
France	5	6	180	No	4	11	180	No
Germany[3, 4]	4	6	188	No	5	10	188	No
Greece	6	6	169	No	3	12	160	No
Hungary	4	6	183	No	4	10	183	No
Iceland	7	6	170	Yes	3	13	170	Yes
Ireland	6	6	181	No	3	12	164	Yes
Israel	6	6	214	No	3	12	206	Yes
Italy	5	6	200	No	3	11	200	No
Japan	6	6	202	No	3	12	202	No
Korea	6	6	190	Yes	3	12	190	Yes
Latvia[5]	6	7	169	Yes	3	13	173	Yes
Lithuania	4	7	175	Yes	6	11	185	Yes
Luxembourg	6	6	180	No	3	12	169	No
Mexico	6	6	190	No	3	12	190	No
Netherlands[6]	6	6	m	Yes	3	12	m	No
New Zealand	6	5	195	m	4	11	193	m
Norway	7	6	190	Yes	3	13	190	Yes
Poland	4	7	179	No	4	11	179	No
Portugal	6	6	173	No	3	12	164	No
Slovak Republic	4	6	189	No	5	10	189	No
Slovenia	6	6	190	No	3	12	185	No
Spain	6	6	175	No	3	12	175	No
Sweden	6	7	178	Yes	3	13	178	Yes
Switzerland	6	6	188	No	3	12	188	No
Türkiye	4	6	180	No	4	10	180	No
United States[3]	6	6	180	m	3	12	180	m
Other economies								
Flemish Comm. (Belgium)	6	6	176	No	2	12	178	No
French Comm. (Belgium)	6	6	177	No	2	12	177	No
England (UK)	6	5	190	m	3	11	190	m
Scotland (UK)	7	5	190	m	3	12	190	m
OECD average	6	6	186	a	3	12	184	a
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil[3]	5	6	200	No	4	11	200	No
Bulgaria	4	7	163	No	3	11	173	No
China	m	m	m	m	m	m	m	m
Croatia	4	7	175	No	4	11	175	No
India	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m
Peru[4]	6	6	185	No	5	12	185	No
Romania	5	6	180	No	4	11	179	No
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m
EU25 average	5	6	181	a	4	12	180	a
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D1.3. Instruction time per subject in primary education (2025)

As a percentage of total compulsory instruction time, in public institutions

	Reading, writing and literature	Mathematics	Natural sciences	Social sciences	Second language	Other languages	Physical education and health	Arts	Religion/ ethics/ moral education	Information and communication technologies (ICT)	Technology	Practical and vocational skills	Other subjects	Compulsory subjects with flexible timetable	Compulsory options chosen by the students	Compulsory flexible subjects chosen by schools	Total compulsory curriculum	Non-compulsory curriculum
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Australia	x(17)	x(17)	x(17)	x(17)	x(17)	a	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	**100**	m
Austria	30	17	13[d]	x(3)	2	a	11	9	9	x(17)	x(3)	6	4	a	a	a	**100**	m
Canada	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	**100**	m
Chile	20	17	9	9	3	x(16)	9	10	6	x(16)	3	x(16)	2	a	a	13[d]	**100**	a
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	a
Costa Rica	23	19	14	9	12	a	5	5	5	a	a	a	9	a	a	a	**100**	a
Czechia	28	17	9[d]	x(3)	8	a	8	10	x(16)	2	4[d]	x(11)	a	a	x(16)	14[d]	**100**	a
Denmark	22	13	5	3	5	2	5	9	3	x(14)	a	6	19	9[d]	a	a	**100**	a
Estonia	23	15	7	5	8	2	11	15	x(16)	x(16)	3	a	a	a	a	12[d]	**100**	a
Finland[1]	23	15	10	4	8	1	9	16	5	x(17)	a	a	a	4	a	4	**100**	5
France	38	21[d]	7[d]	3	6	a	13	8	4	x(2, 3)	x(3)	a	a	a	a	a	**100**	a
Germany[2]	27	21	4	6	4	a	11	13	6	0	2	0	4	a	1	a	**100**	a
Greece	27	14	10	6	9	2	9	10	3	3	a	a	a	a	a	7	**100**	53
Hungary	25	16	2	a	2	a	21	15	4	2	4	a	a	a	a	8	**100**	a
Iceland	20	16	8	13[d]	6[d]	x(5, 15)	9	19[d]	x(4)	3	a	x(8)	a	a	5[d]	x(15)	**100**	a
Ireland[3]	20	17	4[d]	8	14	a	4	12	10	x(17)	x(3)	a	11	a	a	a	**100**	a
Israel	29[d]	15	8[d]	x(1)	7	2	x(12)	x(12)	9	a	x(3)	16[d]	a	a	a	14	**100**	a
Italy[4]	x(14)	x(14)	x(14)	x(14)	x(14)	a	3	x(14)	7	a	x(14)	a	a	90[d]	a	x(17)	**100**	a
Japan	24	16	7	6	3	a	10	12	3	a	a	a	13	6	a	a	**100**	a
Korea	22	14	9[d]	9[d]	6	a	7	9	x(4, 13)	x(12, 13)	x(12)	x(3)	24[d]	a	a	a	**100**	a
Latvia	23	18	8	6	11[d]	x(5)	11	14	x(13, 18)	8[d]	x(10)	x(10)	1[d]	a	a	a	**100**	m
Lithuania	28	18	4	4	7	a	12	16[d]	4	a	x(8)	4	4	a	a	a	**100**	8
Luxembourg[3]	29	19	7	2	15	a	10	11	7	a	a	a	a	a	a	a	**100**	a
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	a	**m**	a
Netherlands[4]	x(14)	x(14)	x(14)	x(14)	x(14)	a	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	a	100[d]	a	a	**100**	a
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Norway	26	17	7	7	7	a	11	14	8	a	a	2	a	a	a	1	**100**	a
Poland[4, 5]	x(14)	x(14)	x(14)	x(14)	x(14)	a	x(14)	x(14)	a	x(14)	x(14)	a	x(14)	100[d]	a	a	**100**	10
Portugal[4]	19	19	x(14)	x(14)	3	a	3	x(14)	a	x(17)	x(14)	a	x(16)	52[d]	a	4[d]	**100**	16
Slovak Republic	32	17	6	3	6	a	8	10	4	2	a	2	x(16)	a	x(16)	8[d]	**100**	a
Slovenia	22	16	8	7[d]	10	a	14	15	x(4)	x(17)	5	2	1	a	a	a	**100**	20
Spain	23	18	7	6	11	x(16)	11	9	7	a	a	a	1	a	x(16)	8[d]	**100**	a
Sweden[1]	28	20	8	14	7	a	8	7	a	a	3	5	a	a	1	x(17)	**100**	m
Switzerland	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	a	a	a	a	**100**	m
Türkiye	30	17	5	13	5	a	14	7	2	a	a	1	7	a	a	a	**100**	a
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Other economies																		
Flemish Comm. (Belgium)[4]	x(14)	x(14)	x(14)	x(14)	x(14)	a	x(14)	x(14)	7	x(17)	x(3)	a	x(17)	93[d]	a	x(14)	**100**	a
French Comm. (Belgium)[4]	21	18	3	6	6	a	8	6	7	3	3	a	6	13	a	a	**100**	a
England (UK)	m	m	m	m	a	a	m	m	m	m	m	a	a	m	a	a	**m**	a
Scotland (UK)	m	m	m	m	m	a	m	m	m	m	m	m	a	a	a	a	**m**	a
OECD average[4]	25	16	7	6	7	0	10	11	5	1	1	2	4	1	0	3	**100**	3
Partner and/or accession countries																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Brazil[2]	x(17)	x(17)	x(17)	x(17)	a	a	x(17)	x(17)	x(17)	x(17)	x(17)	a	a	a	x(17)	x(17)	**100**	m
Bulgaria	28	15	3	5	8	a	9	14	x(15)	2	x(12)	4[d]	a	a	11[d]	a	**100**	16
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Croatia	28	22	13[d]	x(3)	11	a	15	11	a	a	a	a	a	a	a	a	**100**	25
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Peru[2]	14	14	12	12	9	a	10	10	3	a	a	a	7	a	a	8	**100**	a
Romania	28	18	5	4	7	a	12	9	5	a	a	a	12	a	a	a	**100**	a
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
EU25 average[4]	26	17	7	5	8	0	10	11	5	1	2	2	3	1	1	3	**100**	7
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D1.4. Instruction time per subject in general lower secondary education (2025)

As a percentage of total compulsory instruction time, in public institutions

	Reading, writing and literature	Mathematics	Natural sciences	Social sciences	Second language	Other languages	Physical education and health	Arts	Religion/ ethics/ moral education	Information and communication technologies (ICT)	Technology	Practical and vocational skills	Other subjects	Compulsory subjects with flexible timetable	Compulsory options chosen by the students	Compulsory flexible subjects chosen by schools	Total compulsory curriculum	Non-compulsory curriculum
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Australia	x(17)	x(17)	x(17)	x(17)	x(17)	a	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	**100**	m
Austria	13	12	12	11	11	x(15)	11	12	6	3	a	7	x(15)	a	1[d]	a	**100**	m
Canada	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	**100**	m
Chile	16	16	11	11	8	x(16)	5	8	5	x(16)	3	x(16)	3	a	a	14[d]	**100**	a
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	a
Costa Rica	12	12	12	14	7	7	5	10	2	5	a	7	5	a	a	2	**100**	a
Czechia	12	12	16	8	10	5	8	7	x(16)	3	2[d]	x(11)	a	a	x(16)	15[d]	**100**	a
Denmark	18	13	13	8	8	8	8	x(15)	3	x(15)	x(15)	x(15)	18	a	5[d]	a	**100**	a
Estonia	13	14	21	11	10	10	6	6	x(16)	x(16)	5	a	a	a	a	4[d]	**100**	a
Finland[1]	12	13	16	8	8	6	12	7	3	x(17)	a	6	a	6	a	3	**100**	11
France	16	14	11	10	12	7	12	7	2	x(17)	4	1	3	a	a	a	**100**	22
Germany[2]	14	13	12	12	12	4	9	9	5	1	3	1	3	a	2	a	**100**	a
Greece	25	12	13	9	6	6	6	6	6	4	3	1	a	a	a	3	**100**	30
Hungary	12	12	11	10	10	a	17	8	3	3	3	a	3	a	a	6	**100**	a
Iceland	14	14	8	8[d]	19[d]	x(5, 15)	8	8[d]	x(4)	2	a	x(8)	a	a	20[d]	x(15)	**100**	a
Ireland[3, 4]	17	17	x(16)	19	17	x(16)	10	x(16)	x(16)	x(16)	x(16)	x(16)	5	a	a	14[d]	**100**	a
Israel	10	14	13[d]	21	11	8	x(12)	x(16)	5	x(3)	x(3)	11[d]	a	a	a	7[d]	**100**	a
Italy	33[d]	20[d]	x(2)	x(1)	10	7	7	13	3	a	7	a	a	a	a	x(17)	**100**	a
Japan	12	12	12	11	13	a	10	7	3	a	3	a	12	4	a	a	**100**	a
Korea	13	11	20[d]	15[d]	10	a	8	8	x(4)	x(3)	x(12)	x(3)	9	a	x(16)	5[d]	**100**	a
Latvia	15	15	14	15	15[d]	x(5)	9	7	x(13, 18)	10[d]	x(10)	x(10)	1[d]	a	a	a	**100**	m
Lithuania	17	13	12	14	10	5	9	6	3	3	5	a	3	a	a	a	**100**	14
Luxembourg[3]	12	15	8	12	16	6	8	6	4	3	a	a	6	a	4	a	**100**	a
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	a	**m**	a
Netherlands[4]	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	a	100[d]	a	a	**100**	a
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Norway	15	12	9	9	8	x(15)	9	9	6	x(15)	x(15)	7	x(15)	a	15[d]	x(15)	**100**	a
Poland	18	14	11	13	11	4	14	5	a	4	2	0	4	a	a	a	**100**	8
Portugal	13	13	19	16	x(14)	x(14)	10	x(14)	a	x(14)	x(14)	a	a	28[d]	a	a	**100**	3
Slovak Republic	16	14	12	11	10	x(16)	7	6	3	3	a	3	x(16)	a	x(16)	13[d]	**100**	a
Slovenia	13	13	17	15[d]	11	x(15)	9	8	x(4)	x(17)	4	a	2	a	7[d]	a	**100**	23
Spain	15	13	11	10	11	x(16)	7	9	5	a	x(16)	a	3	a	x(16)	15[d]	**100**	a
Sweden[1]	11	15	11	15	8	a	11	7	a	a	3	9	a	a	10	x(17)	**100**	m
Switzerland	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	a	a	x(17)	a	**100**	m
Türkiye	16	14	11	8	10	x(15)	5	6	8	3	3	1	a	a	16[d]	a	**100**	a
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Other economies																		
Flemish Comm. (Belgium)[4]	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	x(14)	6	x(14)	x(14)	a	x(14)	75[d]	x(16)	19[d]	**100**	a
French Comm. (Belgium)[4]	18	15	10	13	13	a	10	3	7	x(16)	3	x(16)	a	a	x(16)	7[d]	**100**	a
England (UK)	m	m	m	m	m	a	m	m	m	m	m	a	m	m	a	a	**m**	a
Scotland (UK)	m	m	m	m	m	m	m	m	m	m	m	m	a	a	a	a	**m**	a
OECD average[4]	14	13	12	11	10	4	8	7	3	3	2	2	3	1	3	3	**100**	4
Partner and/or accession countries																		
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Brazil[2]	x(17)	x(17)	x(17)	x(17)	x(17)	a	x(17)	x(17)	x(17)	x(17)	x(17)	x(17)	a	a	x(17)	x(17)	**100**	m
Bulgaria	17	16	11	13	9	x(15)	7	11	x(15)	5	x(12)	4[d]	a	a	8[d]	a	**100**	13
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Croatia	18	16	15	15	12	a	8	8	a	4	4	a	a	a	a	a	**100**	20
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
Peru[2]	11	11	11	9	9	a	9	9	14	a	a	6	6	a	a	6	**100**	a
Romania	14	14	14	13	7	7	7	7	4	4	4	a	4	a	a	a	**100**	a
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m
EU25 average[4]	15	13	13	11	10	5	9	7	3	3	3	2	2	1	2	3	**100**	7
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	**m**	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter D2. How do student-teacher ratios and class sizes vary across education levels up to upper secondary education?

Highlights

- Between 2013 and 2023, the ratio of children to teachers in pre-primary education fell across most OECD countries, decreasing from an average of 15 children per teacher to 13. Despite this overall trend, a few OECD and partner countries experienced increases in child-to-teacher ratios, often due to rising enrolments and challenges in maintaining a sufficient teaching workforce.
- In primary education, the average student-teacher ratio across OECD countries is 14:1. This is slightly higher than at lower and upper secondary levels, where the student-teacher ratio averages 13:1, although variation across countries at all levels of education remains significant.
- Between 2013 and 2023, the OECD average class size at the primary level remained stable at 21 students per class. However, despite this overall stability, countries including Brazil, Lithuania, Mexico and the Republic of Türkiye experienced notable changes in class sizes, reflecting shifts in demographic trends and changes in education policies.

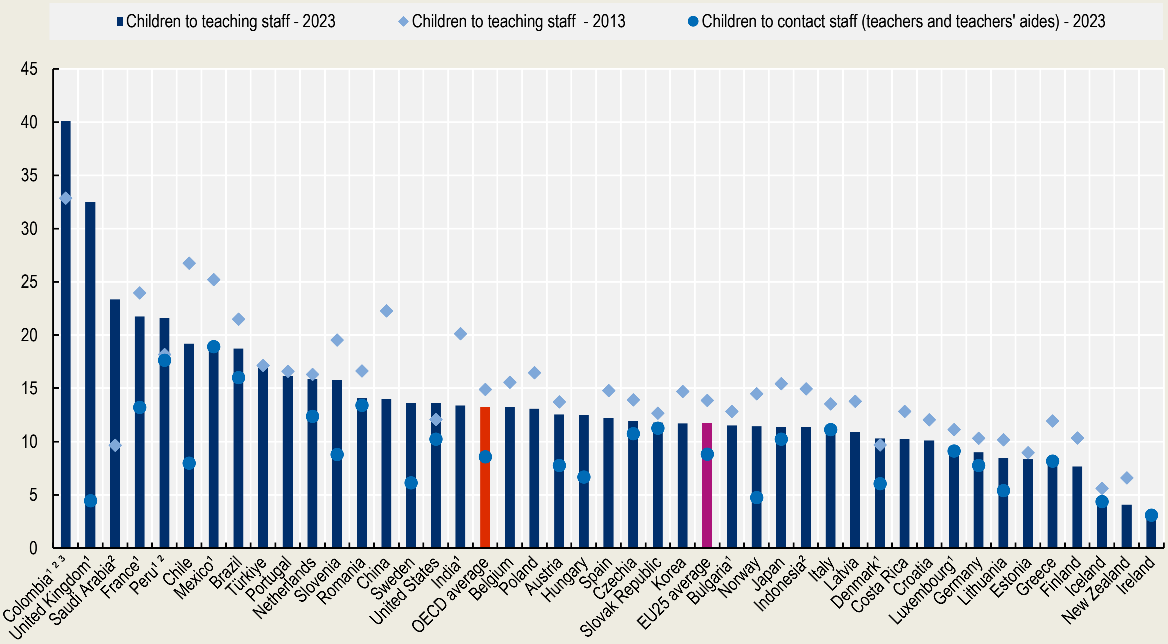
Context

Class size and student-teacher ratio are two key indicators closely monitored by policy makers, as both have a significant impact on educational expenditure, particularly through the cost of teacher salaries. These metrics provide important insights into the allocation of resources within education systems and their potential influence on educational outcomes.

This chapter examines class sizes and student-teacher ratios across multiple educational levels, from early childhood education and care (ECEC) to upper secondary education. At each stage, the nature of teacher-student interactions evolves, reflecting differences in pedagogical approaches and developmental needs. In ECEC settings, for instance, the presence of additional staff such as teacher aides is common, supporting both instructional and caregiving roles. Similar support structures may exist at other educational levels, contributing to the overall learning environment.

In light of current challenges, including demographic shifts, teacher shortages and budget constraints, it is essential to closely monitor these indicators and their evolution over time. These factors influence both the quality of education and the ability of systems to meet the needs of students, requiring ongoing attention from policy makers.

Figure D2.1. Trend in the ratio of children to staff in pre-primary education (2013, 2023)



1. Year of reference differs from 2013.
2. Year of reference differs from 2023.
3. Overestimation of student–staff ratios due to classification challenges between early childhood educational development and pre-primary education levels, as some staff classified under ECEC also teach in pre-primary classes.
For data, see Table D2.1. For a link to download the data, see Tables and Notes section.

Other findings

- Child-to-staff ratios are generally lower for younger children in early childhood educational development services than in pre-primary education, averaging 9:1 across OECD countries. This reflects the greater need for close adult supervision in settings for children under the age of 3.
- Differences in student-teacher ratios between general and vocational upper secondary programmes remained evident, with vocational tracks having higher ratios in 12 OECD countries.
- Between 2013 and 2023, class sizes in public and private primary institutions have remained stable. In lower secondary education, class sizes in public schools also showed little change, while private institutions experienced a slight decrease.

Note

Student-teacher ratios and class sizes measure very different characteristics of the educational system. Student-teacher ratios compare the number of students to the number of teachers at a given level of education and in similar types of institutions. This indicator provides information on the level of teaching resources available in a country relative to its student population and serve as a pivotal indicator reflecting the human resources allocated, whether directly or indirectly, to children's education. This ratio is of importance from both administrative and economic standpoints as it is closely related to the amount of money spent per student.

In contrast, class sizes measure the average number of students that are grouped together in a classroom, which has greater significance from a psychological standpoint and is a more direct measure of the teaching resources brought to bear on a student’s development. At higher levels of education, students are often split into several different classes, depending on the subject area. This makes class sizes difficult to define and compare at these levels. Therefore, the indicator on class size is limited to primary and lower secondary education.

Analysis

Staffing of early childhood education

Early childhood education and care (ECEC) profoundly influences children's educational, cognitive, behavioural and social development, both in the short and long term. As a foundational stage in lifelong learning and well-being, high-quality ECEC contributes to reducing inequalities and promoting inclusion from an early age. The quality of ECEC systems is influenced by a complex interplay of factors, including curriculum and pedagogy, staff education and training, workforce composition, staff-to-child ratios, and monitoring mechanisms at the system and setting level. These elements serve as key policy levers to enhance service quality and foster more equitable and inclusive environments (OECD, 2025[1]). Although no single indicator can fully reflect the complexity of the quality in ECEC and the interactions between children and staff, indicators such as workforce composition and staff-child ratios provide valuable insights into two essential dimensions of quality.

Type of staff working with young children

A diverse ECEC workforce plays a vital role in recognising and responding to the unique needs and strengths of children from varied cultural and individual backgrounds. It also provides children with exposure to adults with a range of profiles, experiences and expertise. In many countries, early childhood care is delivered by teams of professionals rather than a single educator managing an entire group, as is more typical in primary education (European Commission / EACEA / Eurydice, 2025[2]). These professionals often have different qualifications and levels of compensation, reflecting the variety of their responsibilities and the specific age groups they serve.

Staff who work directly and regularly as the principal contact with children in ECEC settings often hold titles that differ from traditional classroom teachers – such as pedagogues, educators, childcare practitioners, group-leading personnel or kindergarten teachers – reflecting national and institutional differences in ECEC systems. The minimum qualification requirements for these roles vary significantly depending on the ages of children they work with. In OECD countries, two-third of programmes serving children aged 3 and above require staff in these roles to hold at least a bachelor’s or master’s qualification. In contrast, only one-third of programmes for children under the age of 3 require personnel to have the same level of educational attainment (see Chapter B1, Box B1.1).

Although classroom teachers are traditionally regarded as the core practitioners in ECEC, there is growing recognition of the contributions made by auxiliary staff. The research literature highlights that assistant teachers or teachers’ aides play a crucial role in children’s development by facilitating learning, bridging gaps and providing caring support in various scenarios (Figueras-Daniel and Li, 2021[3]; Mowrey and Farran, 2021[4]; Webster and De Boer, 2019[5]). For instance, in Norway, kindergarten assistants engage directly with children, although they do not hold responsibility for providing educational content, which remains the domain of educational leaders. Similarly, in Japan, support staff play a key role in ensuring the smooth execution of teachers’ duties, contributing to the overall functioning of ECEC settings.

Teachers also benefit from the availability of support from other professional staff. The integration of specialised staff such as speech therapists, psychologists and school counsellors can enhance the overall effectiveness of early childhood teams by bringing targeted expertise to meet children’s diverse developmental needs. Through consultative guidance and tailored interventions, these professionals help promote more inclusive and responsive practices (European Commission / EACEA / Eurydice, 2025[2]; Fukkink and van Verseveld, 2020[6]). Moreover, teachers who experience supportive relationships with co-workers and supervisors report less stress and depression (Smith and Lawrence, 2019[7]). For instance, Lithuania employs a wide range of support personnel, including speech therapists, psychologists, art educators and swimming instructors, who contribute to both individualised support and group-based developmental activities. In Korea, kindergartens include special education teachers who adapt instruction to meet the individual needs of children. Ultimately, the composition of the ECEC workforce carries important policy implications not only for delivering high-quality education and care, but also for effective and sustainable human resource planning within the sector.

ECEC settings also rely on institution-level management personnel whose primary responsibilities include overseeing planning, supervision, co-ordination and overall administration. In practice, the boundaries between managerial and teaching roles may overlap when the ECEC setting is small. For example, teachers may assume administrative duties, while management staff may step into teaching roles when required. In Japan, for instance, vice principals in kindergartens support the principal in managing daily operations and, when necessary, assist directly in the care and education of young children.

Child-staff ratio and child-teacher ratio

The ratios of children to teachers and to contact staff both provide insight into staff intensity but capture different aspects of provision. The child-to-teacher ratio refers to the number of children per qualified teacher, while the child-to-contact-staff ratio covers all staff members who work directly with children, including both teachers and teachers' aides. It is important to distinguish between the two, as they can lead to very different interpretations of staff availability in ECEC settings.

Developmental science highlights the importance of sensitive and individualised interactions between adults and young children, particularly in the early years of life. When staff-to-child ratios are lower and group sizes are smaller, educators can spend less time on managing group dynamics and more time engaging meaningfully with each child. These enriched interactions foster stronger, more supportive relationships, which are essential components of high-quality early childhood education. Higher interaction quality has been closely linked to improved outcomes in children's cognitive development, emotional regulation, and overall well-being (OECD, 2025[1]; OECD, 2021[8]; OECD, 2018[9]). Moreover, the benefits extend to staff as well: responsive educator-child relationships contribute to a more positive and sustainable work environment. In such settings, educators experience more stable and fulfilling professional relationships, which are associated with reduced staff turnover and greater continuity in children's care and learning experiences (COFACE, 2023[10]).

These benefits mean lower child-staff ratios are often associated with higher quality ECEC provision and for this reason are frequently subject to regulation. On average in OECD countries, there are 13 children for every teacher working in pre-primary education (ISCED 02) in 2023, with wide variations across countries. The ratio of children to teaching staff, excluding teachers' aides, ranges from less than 5 children per teacher in New Zealand to 40 in Colombia (Table D2.1).

Some countries make extensive use of teachers' aides. When counting all contact staff (teachers and teachers' aides), child-to-contact staff ratios are significantly lower than the child-to-teacher ratios alone. For example, in the United Kingdom, the child-to-contact-staff ratio in pre-primary settings is 4, compared to a much higher child-to-teacher ratio of 32, due to the widespread use of teachers' aides. Similarly, in Chile, pre-primary education relies heavily on teachers' aides, resulting in a child-to-contact-staff ratio of 8, while the child-to-teacher ratio stands at 19 (Table D2.1). Maintaining low ratios can be difficult when resources are scarce or when the demand for early childhood education exceeds the supply of trained professionals. Nonetheless, countries that effectively incorporate teachers' aides into the workforce are generally able to achieve much lower child-to-adult ratios, even when the number of qualified teachers is limited.

Lower child-staff ratios are particularly important for high-quality interactions with children under 3 (COFACE, 2023[10]). Child-to-teacher ratios in early childhood educational development services (ISCED 01) are consistently lower than those for pre-primary across all OECD and partner countries except Lithuania, Mexico, New Zealand, Peru and Romania. On average across OECD countries, there are 9 children for every teacher working in early childhood educational development services, ranging from 3 in Iceland to 62 in Peru (Table D2.1).

Differences in ratios are also observed between public and private providers. In pre-primary education, public institutions have slightly higher child-to-teacher ratios, averaging 15 children per teacher compared to 13 in private institutions. In early childhood education and development settings, this pattern is reversed: private institutions report 11 children per teacher on average, while public institutions report 8. These differences may reflect variations in regulation, funding structures and workforce composition between the public and private sectors (Table D2.1).

Trends in child-teacher ratios

Between 2013 and 2023, the ratio of children to teaching staff at pre-primary level fell from 15:1 to 13:1 on average in OECD countries. Most OECD and partner countries have seen a reduced ratio, with the drop being especially notable in Chile, China, India and Mexico, where the ratio fell by at least six children per teacher (Figure D2.1). In Chile, the significant improvement in child-to-teacher ratios can be attributed to substantial government investments in early childhood education including the expansion of public nurseries and kindergartens and the establishment of a dedicated undersecretariat for pre-primary education in 2015 (Castillo and Lobos, 2017[11]). These efforts aimed to reduce overcrowding and enhance staff-to-child ratios.

Improvements were also notable in early childhood educational development programmes across OECD countries, with the average ratio decreasing from 11:1 in 2013 to 9:1 in 2023. Mexico recorded the largest improvement, reducing its ratio by 24 children per teacher. Chile and Indonesia also made notable progress, each achieving reductions of at least five children per teacher (Table D2.1).

In contrast to the prevailing downward trend, the child-teacher ratio in pre-primary education increased by at least seven children per teacher in Colombia and Saudi Arabia between 2013 and 2022. This was a combined effect of both an increase in the number of children enrolled in pre-primary education and a fall in the number of teachers (Figure D2.1). The increase in student enrolment can be largely attributed to increased participation among children of pre-primary age during the period (see Table B1.2 in Chapter B1). In parallel, Saudi Arabia faces a significant challenge due to a shortage of qualified kindergarten teachers (OECD, 2020[12]).

Staffing of primary education

Primary school teachers play a pivotal role in children’s cognitive, emotional and social development (Jowett et al., 2023[13]; Rucinski, Brown and Downer, 2018[14]). In most OECD countries, primary school teachers typically teach several subjects to the same group of students, allowing for sustained interactions and stronger relational continuity. This daily proximity enables teachers to respond more effectively to individual learning needs and foster a supportive classroom climate. Lower student–teacher ratios in primary education can enhance these interactions by giving teachers more time and flexibility to engage with each student (Werler and Tahirsylaj, 2020[15]).

At primary level, there are 14 students for every teacher on average across OECD countries. In OECD and partner countries, the student-teacher ratio ranges from 8:1 in Greece to over 22:1 in Colombia, India, Mexico, Peru and South Africa. Across OECD countries, the student-teacher ratio at primary level experienced a general decrease from 2013 to 2023 with the exception of Austria, Latvia, Lithuania and Poland (Table D2.2).

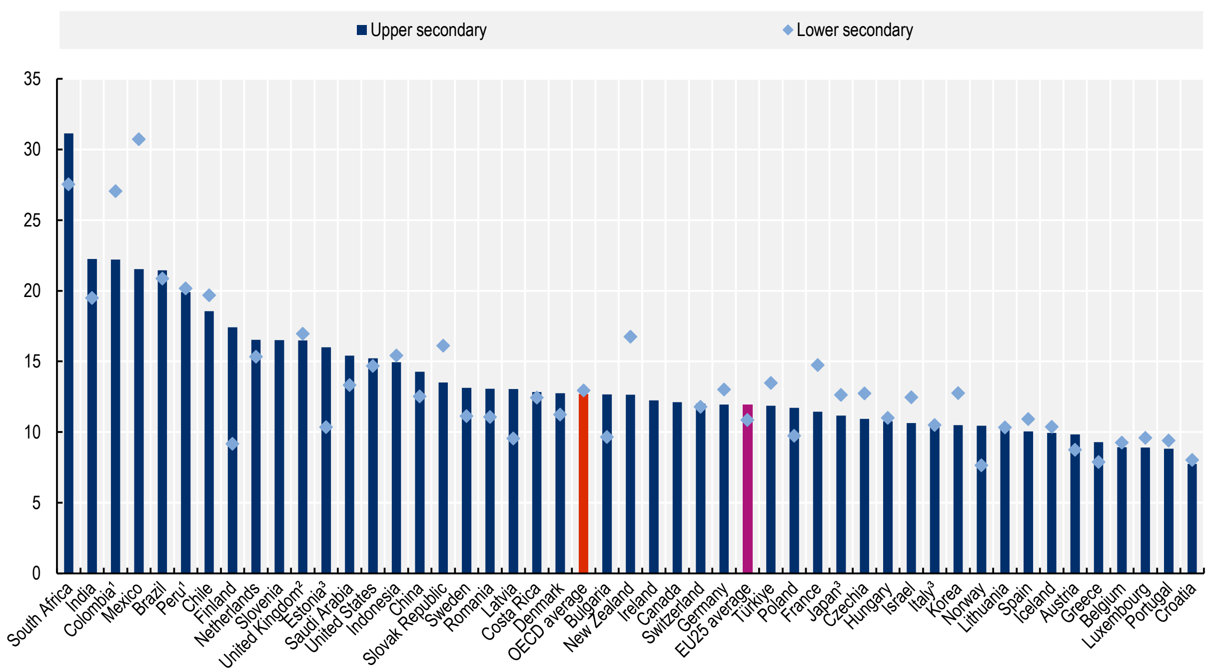
Staffing of lower and upper secondary education

Teachers in lower secondary education often act as a bridge between the generalist approach of primary education and the subject specialisation of upper secondary levels. They support students during early adolescence, a critical period for social and emotional development, while introducing more structured academic expectations. In some educational systems, lower secondary teachers are trained to teach multiple subjects and maintain continuous interactions with a consistent group of students, which can help strengthen teacher–student relationships and provide stability as students adapt to more complex school environments. Recent research has shown that such sustained interactions contribute positively to students’ social participation and sense of belonging (Schürer, van Ophuysen and Marticke, 2025[16]).

Upper secondary teachers, in contrast, are typically subject specialists who work with older students preparing for higher education or the labour market. Their instructional role is more academic or vocational, depending on the educational track, and their relationships with students tend to be more formal and content focused. Given the segmented nature of upper secondary education – where teachers often see many different student groups each day – opportunities for individualised support are more limited. In this context, student-teacher ratios can influence the capacity of teachers to provide personalised guidance and monitor learning effectively.

At lower secondary level, the student-teacher ratio is about 13 students per teacher on average across OECD countries. It varies widely, from fewer than 9 students per teacher in countries like Croatia, Greece and Norway to more than 30 students per teacher in Mexico. At upper secondary level, the student-teacher ratio is also about 13 students per teacher on average. Despite this overall similarity, notable differences emerge when comparing the ratios between lower and upper secondary education within individual countries. In 12 OECD countries, the student-teacher ratio is higher at upper secondary level – for example, Finland has 8 more students per teacher in upper secondary education. In contrast, 14 OECD countries show lower ratios at this level, such as Mexico where there are 9 fewer students per teacher in upper secondary education. Despite these variations, Finland's ratio at upper secondary level remains lower than Mexico's, reflecting differences in national contexts, including how education systems are structured, differences in population density and school size, teacher workforce availability, policy priorities, and the level of public investment in education (Figure D2.2).

Figure D2.2. Ratio of students to teaching staff in lower and upper secondary education, by level of education (2023)



1. Year of reference differs from 2023.
2. Upper secondary general programmes only.
3. Student-teacher ratios at upper secondary level include information from post-secondary non-tertiary education.
For data, see Table D2.2. For a link to download the data, see Tables and Notes section.

At upper secondary level, the student-teacher ratio can vary dramatically depending on the programme orientation. In 11 OECD countries, the ratio is higher in vocational programmes than in general ones. In Colombia, there are about 30 more students per teacher in vocational programmes than in general ones, while the difference is 9 more in Latvia, 6 more in Denmark and 5 more in New Zealand. In other OECD and partner countries, such as Brazil and Mexico, the difference is reversed: there are over eight more students per teacher in general programmes (Table D2.2).

Class size

Class size continues to be a key concern for schools, education authorities, policy makers and parents, and can influence school choice. Smaller classes are generally perceived as enabling teachers to provide more individualised attention, reduce the time they spend on classroom management and align their instruction better to students' learning needs. While the overall evidence on the direct impact of class size on student performance remains mixed (OECD, 2016[17]), many systems continue to prioritise it as a policy lever to support teaching and learning, particularly for disadvantaged students.

In response to these concerns, countries have implemented a range of policies aimed at addressing class sizes, especially in contexts of educational disadvantage. In France, class sizes have been reduced in early primary education within schools located in priority education areas, as part of a broader effort to address educational inequality (Government of France, 2023[18]; DEPP, 2020[19]). Ireland has adopted similar measures through its Delivering Equality of Opportunity in Schools (DEIS) programme, which includes lower staffing ratios in schools serving disadvantaged communities (Government of Ireland, 2020[20]). These strategies reflect a shared policy rationale that smaller classes may help improve learning conditions and support equity, even where evidence on learning outcomes is not always conclusive.

Average class size in primary and lower secondary education

In OECD countries, the average class size at primary level is 21 students. Most countries, except Chile, Israel, Japan and the United Kingdom, have fewer than 25 students per class on average. At lower secondary level, the average class size is 23 students across OECD countries. Class sizes vary widely, from fewer than 20 students per class in OECD and partner countries like Croatia, Estonia, Finland, Latvia, Luxembourg and Poland to more than 30 students per class in Chile and Japan (Table D2.3).

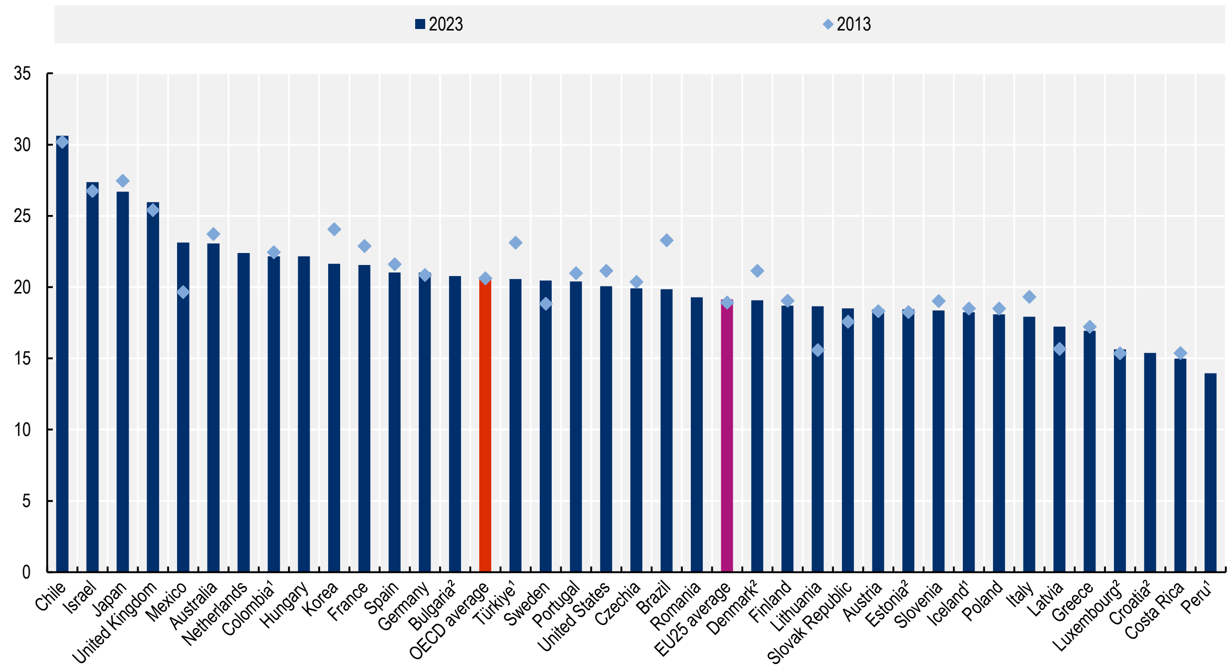
The number of students per class tends to increase from primary to lower secondary education in most countries, particularly in Costa Rica where it increases by 14 students. In contrast, in Australia, Hungary and the United Kingdom, the number of students per class falls between these two levels of education (Table D2.3).

Trends in average class sizes

Over the past decade, many education systems have been influenced by two concurrent trends: a decline in the school-age population and an increasing teacher shortage (OECD, 2024[21]). While these dynamics may seem to offset each other – fewer students could imply reduced pressure on staffing – the reality is more complex. Many systems struggle to recruit and retain qualified teachers, particularly in rural areas or for specific subjects, limiting their flexibility to adjust class sizes (OECD, 2024[22]). At the same time, budgetary constraints and rigid staffing formulas further complicate matters (OECD, 2020[23]). Moreover, despite falling enrolment in many systems, growing expectations for inclusive education, personalised learning and student well-being continue to increase demand for teaching personnel. As a result, average class sizes have remained stable or even risen in specific contexts.

Between 2013 and 2023, average class sizes remained relatively stable at both primary and lower secondary levels across OECD countries, although there were significant changes in individual OECD and partner countries. At primary level, average class sizes reduced by three students in Brazil and increased by three students in Lithuania and Mexico (Figure D2.3). At lower secondary level, the change in some countries is even more striking, where the average class size fell by seven students in Korea and increased by four in the United Kingdom between 2013 and 2023 (Table D2.3).

Figure D2.3. Trends in average class size at primary education (2013 and 2023)



1. Year of reference differs from 2023.
2. Year of reference differs from 2013.
For data, see Table D2.3. For a link to download the data, see Tables and Notes section.

Similarly, class sizes remained steady in both public and private primary institutions from 2013 to 2023 on average across the OECD, while individual countries experienced significant changes. For example, in Latvia, both public and private institutions had among the lowest average class sizes in 2013. However, by 2023 private institutions in Latvia saw a substantial increase from 8 to 13 students per class, while student teacher-ratio in public institutions remained broadly stable. A similar trend was observed in the United Kingdom, where the average class size in private primary schools rose from 18 to 25 students between 2013 to 2023, while those in public ones remained stable. In contrast, Türkiye experienced decreases in both cases over the same period: public schools saw a slight decline from 23 to 22 students per class, while private schools experienced a more substantial drop, from 20 to 11 students per class. This reduction in class size during the period likely reflects increased investment in school infrastructure and education personnel. (Table D2.3).

Definitions

Early childhood education (ECE): ECEC services in adherence with the criteria defined in the ISCED 2011 classification (see ISCED 01 and 02 definitions) are considered early childhood education programmes and are therefore referred to as ECE in this chapter. Therefore, the term ECE excludes programmes that do not meet the ISCED 2011 criteria.

Teachers' aides and teaching/research assistants include personnel or students who support teachers in providing instruction to students.

Teaching staff refers to personnel directly involved in teaching to students. The classification includes classroom teachers, special-education teachers and other teachers who work with a whole class of students in a classroom, in small groups in a resource room, or in one-to-one teaching situations inside or outside a regular class.

Class size is defined as the number of students who are following a common course of study, based on the highest number of common courses (usually compulsory studies), and excluding teaching in subgroups.

Methodology

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. Exceptionally, for early childhood educational development (ISCED 01) and pre-primary education (ISCED 02), this ratio is based on headcounts of students and full-time equivalent teachers due to the complexities arising from the lack of standardized study load criteria, variability in full-time enrolment hours, and the absence of a universally accepted FTE calculation methodology.

For the ratio of students to teachers to be meaningful, consistent coverage of personnel and enrolment data are needed. For instance, if teachers in religious schools are not reported in the personnel data, then students in those schools must also be excluded.

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

Source

Data refer to the reference year 2023 (school year 2022/23) and are based on the UNESCO-UIS/OECD/Eurostat data collection on education statistics administered by the OECD in 2024/25. For more information see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Data from Argentina, the People’s Republic of China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

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Tables and Notes

Chapter D2 Tables

Table D2.1	Ratio of children to staff in early childhood education (ECE), by level of education and type of institution (2023)
Table D2.2	Trends in the ratio of students to teaching staff from primary to upper secondary, by level of education (2013 and 2023)
Table D2.3	Trends in average class sizes in primary and lower secondary education (2013 and 2023)

StatLink https://stat.link/4am3u9

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D2.1. Ratio of children to staff in early childhood education (ECE), by level of education and type of institution (2023)

1. Year of reference differs from 2013: 2014 for Denmark, Luxembourg, Mexico, New Zealand, United Kingdom, Bulgaria and Croatia; 2015 for India and Peru; and 2016 for Colombia and France.
2. Year of reference differs from 2023: 2022 for Colombia, Peru and Saudi Arabia; and 2018 for Indonesia.

Table D2.2. Ratio of students to teaching staff from primary to upper secondary education, by level of education (2023)

1. Year of reference differs from 2013: 2014 for Colombia, Denmark, Türkiye, Bulgaria, Croatia, Peru and Saudi Arabia; and 2016 for France.
2. Year of reference differs from 2023: 2022 for Colombia, Ireland, China, India, Peru, Saudi Arabia and South Africa; and 2018 for Indonesia.
3. Student-teacher ratios at upper secondary education includes information from post-secondary non-tertiary education.
4. Public institutions only.

Table D2.3. Average class size at primary and lower secondary education (2013 and 2023)

1. Year of reference differs from 2013: 2015 for Costa Rica, Sweden, Switzerland and Indonesia.
2. Year of reference differs from 2023: 2022 for Croatia and Peru.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table D2.1. Ratio of children to staff in early childhood education (ECE), by level of education and type of institution (2023)

	Early childhood educational development (ISCED 01)						Pre-primary (ISCED 02)					
	Share of teachers' aides among contact staff (%)	Children to contact staff (teachers and teachers' aides)	Children to teaching staff				Share of teachers' aides among contact staff (%)	Children to contact staff (teachers and teachers' aides)	Children to teaching staff			
			All institutions		Public institutions	Private institutions			All institutions		Public institutions	Private institutions
	2023	2023	2013	2023	2023	2023	2023	2023	2013	2023	2023	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	45	5	9	9	9	10	38	8	14	13	12	14
Belgium	m	m	m	m	m	m	m	m	16	13	13	13
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	25	6	13	8	3	9	59	8	27	19	15	21
Colombia[1, 2]	m	m	m	m	6	m	m	m	33	40	79	12
Costa Rica	m	m	9	5	3	6	m	m	13	10	11	6
Czechia	a	a	a	a	a	a	10	11	14	12	12	10
Denmark[1]	42	3	m	5	5	m	42	6	10	10	9	m
Estonia	m	m	x(9)	x(10)	x(11)	x(12)	m	m	9[d]	8[d]	8[d]	10[d]
Finland	m	m	m	m	m	m	m	m	10	8	m	m
France[1]	a	a	a	a	a	a	39	13	24	22	21	27
Germany	12	4	5	5	4	5	14	8	10	9	9	9
Greece	m	m	m	m	m	m	a	8	12	8	8	13
Hungary	a	7	m	7	6	11	47	7	m	13	13	12
Iceland	a	3	3	3	3	3	a	4	6	4	4	5
Ireland	x(7)	x(8)	a	x(10)	m	x(12)	1[d]	3[d]	m	3[d]	m	3[d]
Israel	m	m	m	m	a	m	m	m	m	m	18	m
Italy	a	a	m	a	a	a	a	11	14	11	10	16
Japan	a	a	a	a	a	a	10	10	15	11	8	12
Korea	m	m	5	5	5	5	m	m	15	12	10	13
Latvia	m	m	a	5	5	5	m	m	14	11	11	15
Lithuania	42	6	9	10	11	8	36	5	10	8	9	7
Luxembourg[1]	a	a	a	a	a	a	a	9	11	9	9	8
Mexico[1]	70	7	46	22	17	28	a	19	25	19	20	14
Netherlands	a	a	a	a	a	a	22	12	16	16	16	16
New Zealand[1]	m	m	4	6	6	6	m	m	7	4	5	4
Norway	59	3	8	6	6	7	59	5	14	11	11	12
Poland	a	a	a	a	a	a	m	m	16	13	13	13
Portugal	m	m	m	m	m	m	m	m	17	16	15	18
Slovak Republic	a	a	a	a	a	a	5	11	13	12	12	10
Slovenia	45	5	13	9	9	9	45	9	20	16	16	13
Spain	m	m	9	9	8	10	m	m	15	12	11	14
Sweden	60	5	m	13	12	17	55	6	m	14	13	17
Switzerland	a	a	a	a	a	a	m	m	m	m	18	m
Türkiye	m	m	m	m	m	m	m	m	17	17	17	18
United Kingdom[1]	91	3	a	30	21	31	86	4	m	32	25	35
United States	m	m	m	m	m	m	25	10	12	14	17	10
OECD average	49	5	11	9	8	11	35	9	15	13	15	13
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	34	8	15	12	12	13	15	16	21	19	19	17
Bulgaria[1]	a	a	a	a	a	a	m	m	13	11	12	8
China	a	a	a	a	a	a	m	m	22	14	14	14
Croatia[1]	m	m	10	7	7	8	m	m	12	10	10	12
India[1]	a	a	a	a	a	a	m	m	20	13	m	m
Indonesia[2]	m	m	20	10	12	10	m	m	15	11	10	11
Peru[1, 2]	30	44	9	62	109	12	18	18	18	22	26	14
Romania	6	15	m	16	16	11	5	13	17	14	15	10
Saudi Arabia[2]	m	m	m	m	m	m	m	m	10	23	28	14
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	36	6	9	9	8	9	28	9	14	12	12	12
G20 average	52	5	18	14	12	15	m	m	17	16	16	16

Note: See under Chapter D2 Tables for StatLink and for the notes related to this Table.

Table D2.2. Trends in the ratio of students to teaching staff from primary to upper secondary, by level of education (2013 and 2023)

	Primary		Lower secondary		Upper secondary: General programmes	Upper secondary: Vocational programmes	Upper secondary: All programmes	
	2013	2023	2013	2023	2023	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	15	14	m	x(5)	12d	m	m	m
Austria	12	13	9	9	10	10	10	10
Belgium	13	12	9	9	11	8	10	9
Canada	16d	16d	x(1)	x(2)	x(8)	x(8)	14	12
Chile	23	17	24	20	19	19	25	19
Colombia[1, 2]	24	23	26	27	25	55	22	22
Costa Rica	13	11	14	12	13	12	14	13
Czechia	19	18	11	13	11	11	11	11
Denmark[1]	12	12	11	11	11	17	13	13
Estonia[3]	13	12	10	10	15	18d	14d	16d
Finland	13	12	9	9	15	19	16	17
France[1]	20	18	14	15	14	8	11	11
Germany	16	15	14	13	12	13	13	12
Greece	9	8	7	8	10	8	8	9
Hungary	m	11	10	11	12	10	12	11
Iceland	10	10	10	10	x(8)	x(8)	m	10
Ireland[2]	16	13	x(7)	x(8)	12d	a	14d	12d
Israel	15	15	14	12	m	m	11	11
Italy[3]	12	11	12	10	10	11d	m	11d
Japan[3]	17	15	14	13	m	m	12d	11d
Korea	17	15	18	13	11	8	15	10
Latvia	11	13	8	10	10	20	10	13
Lithuania	10	14	8	10	10	12	8	10
Luxembourg	9	9	11	10	9	8	9	9
Mexico	28	23	32	31	26	16	27	22
Netherlands	17	16	16	15	15	17	19	17
New Zealand	16	16	16	17	12	17	13	13
Norway	10	10	10	8	10	10	10	10
Poland	11	13	10	10	13	11	11	12
Portugal	13	12	10	9	x(8)	x(8)	8	9d
Slovak Republic	17	14	12	16	14	13	14	14
Slovenia	16	12d	8	x(2)	18	16	13	17
Spain	14	12	12	11	11	8	11	10
Sweden	m	13	m	11	x(8)	x(8)	m	13
Switzerland[4]	15	15	12	12	11	12	m	12
Türkiye[1]	19	18	18	13	13	11	15	12
United Kingdom	22	19	18	17	16	m	19	m
United States	15	14	15	15	15	a	15	15
OECD average	15	14	13	13	13	14	14	13
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	26	22	26	21	23	15	25	21
Bulgaria[1]	18	10	13	10	11	14	12	13
China[2]	17	16	13	13	m	m	18	14
Croatia[1]	14	12	9	8	10	7	10	8
India[2]	32	28	30	19	m	m	32	22
Indonesia[2]	16	17	14	15	m	m	17	15
Peru[1, 2]	18	24	m	20	20	a	m	20
Romania	19	18	13	11	14	12	16	13
Saudi Arabia[1, 2]	11	14	11	13	m	m	11	15
South Africa[2]	32	27	m	28	m	m	m	31
EU25 average	14	13	11	11	12	12	12	12
G20 average	20	18	18	17	m	m	17	16

Note: See under Chapter D2 Tables for StatLink and for the notes related to this Table.

Table D2.3. Trends in average class sizes in primary and lower secondary education (2013 and 2023)

	Primary						Lower secondary					
	Public institutions		Private institutions		All institutions		Public institutions		Private institutions		All institutions	
	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	23	23	25	23	24	23	23	22	25	19	24	20
Austria	18	18	19	19	18	18	21	21	22	21	21	21
Belgium	m	m	m	m	m	m	m	m	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	29	28	31	32	30	31	31	29	31	33	31	32
Colombia	24	24	19	17	22	22	30	30	25	22	29	28
Costa Rica[1]	15	15	17	16	15	15	28	31	21	20	27	29
Czechia	20	20	15	14	20	20	22	23	19	14	22	22
Denmark	21	20	19	17	21	19	21	20	20	19	21	20
Estonia	18	19	16	15	18	18	18	19	14	16	18	19
Finland	19	19	17	18	19	19	20	19	20	21	20	19
France	23	21	23	25	23	22	25	25	26	27	25	26
Germany	21	21	21	20	21	21	24	24	24	22	24	23
Greece	17	17	19	22	17	17	22	21	23	23	22	21
Hungary	21	23	m	20	m	22	21	20	m	20	m	20
Iceland	19	18	16	15	18	18	20	20	13	17	20	20
Ireland	25	23	m	m	m	m	m	m	m	m	m	m
Israel	28	28	24	26	27	27	29	31	24	26	28	30
Italy	19	18	20	18	19	18	22	20	22	21	22	20
Japan	27	27	30	28	27	27	32	32	34	33	33	32
Korea	24	22	29	27	24	22	33	26	32	25	33	26
Latvia	16	17	8	13	16	17	15	18	9	25	14	18
Lithuania	16	19	12	15	16	19	20	22	19	18	20	22
Luxembourg	15	15	19	21	15	16	19	18	18	21	19	18
Mexico	20	24	19	19	20	23	28	26	24	22	27	25
Netherlands	m	22	m	22	m	22	m	m	m	m	m	m
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m
Norway	a	a	a	a	a	a	a	a	a	a	a	a
Poland	19	19	11	13	18	18	23	19	17	13	22	18
Portugal	21	21	21	19	21	20	22	21	23	23	22	22
Slovak Republic	18	19	17	18	18	19	19	21	18	19	19	21
Slovenia	19	18	22	19	19	18	20	21	19	19	20	21
Spain	21	20	24	23	22	21	25	24	26	26	25	25
Sweden[1]	19	21	17	19	19	20	21	22	22	21	21	22
Switzerland[1]	19	19	m	m	m	m	19	19	m	m	m	m
Türkiye	23	22	20	11	23	21	28	28	20	13	28	26
United Kingdom	27	27	18	25	25	26	20	25	19	23	19	24
United States	22	21	18	16	21	20	28	22	20	15	27	21
OECD average	21	21	20	20	21	21	23	23	22	21	23	23
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	25	21	18	16	23	20	28	26	24	23	28	25
Bulgaria	m	21	m	14	m	21	m	22	m	13	m	22
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia[2]	m	15	m	16	m	15	m	18	m	17	m	18
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia[1]	m	m	m	m	m	m	m	m	m	m	m	m
Peru[2]	m	13	m	18	m	14	m	22	m	21	m	22
Romania	m	19	m	16	m	19	m	20	m	16	m	20
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	19	19	18	18	19	19	21	21	20	20	21	21
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: See under Chapter D2 Tables for StatLink and for the notes related to this Table.

Chapter D3. How much are teachers and school heads paid?

Highlights

- In most OECD countries, the statutory salaries of teachers increase with the level of education they teach. On average across OECD countries and economies, the salaries of teachers with the most prevalent qualifications with 15 years of experience range from USD 55 725 at pre-primary level to USD 63 925 at upper secondary level.
- Between 2015 and 2024, statutory salaries for both starting teachers and for teachers with 15 years of experience increased in most countries, but usually at a different rate. On average across OECD countries and economies with comparable data from 2015 to 2024 for primary and secondary teachers with the most prevalent qualification, salaries for those with 15 years of experience increased by 4-6%. Meanwhile, starting salaries for these teachers increased by 14-17% over the same period.
- On average, teachers' actual salaries at primary and general secondary levels of education are 83-91% of the earnings of tertiary-educated workers across OECD countries. Usually school heads' actual salaries are higher than those of tertiary-educated workers.

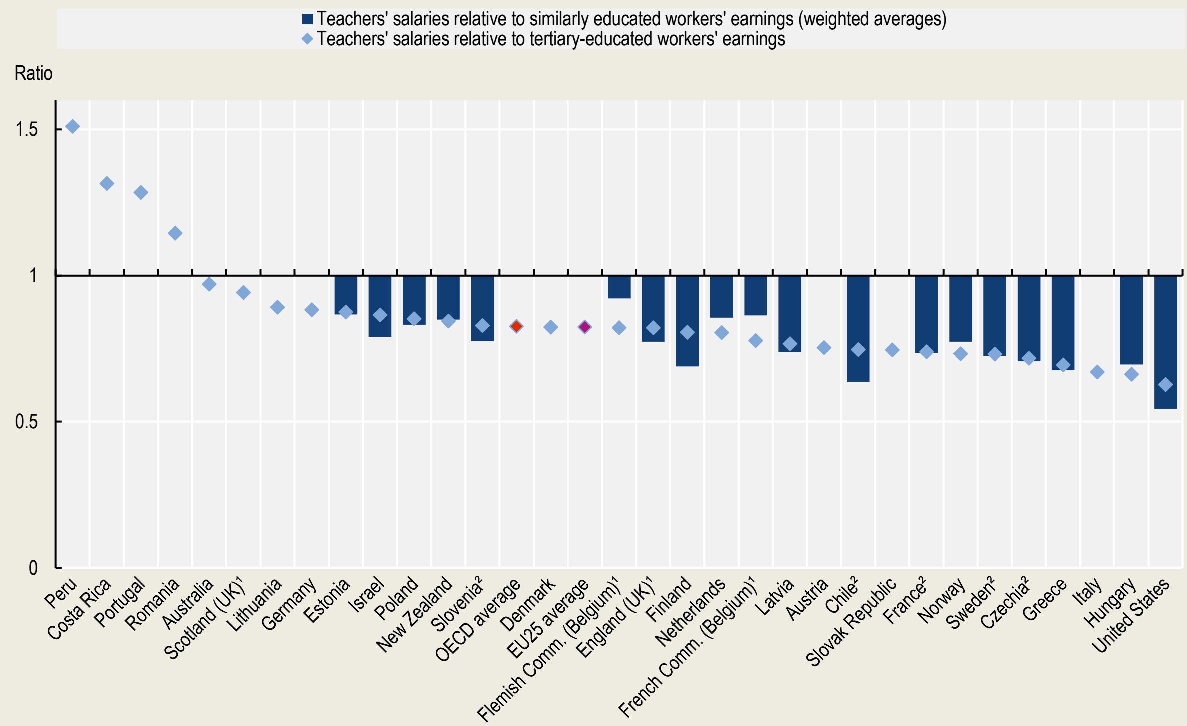
Context

Pay and working conditions are important factors for attracting, developing and retaining skilled and high-quality teachers (see Chapter D8 for information about teacher shortages in secondary education). Teachers' salaries, in absolute terms and relative to those of other professions, can have a direct impact on the attractiveness of teaching as a career, although other aspects can also be influential, such as opportunities for professional development, administrative workloads and how teachers are perceived (OECD, 2023[1]). They can influence decisions on whether to enrol in teacher education, to become a teacher (Nagler, Piopiunik and West, 2020[2]) and to remain in teaching (Qin, 2020[3]); in general the higher teachers' relative salaries are, the more attractive the profession. Salaries and career prospects can also have an impact on the decision to become and remain a school head (see Box D3.2 for pathways into school head positions). Relatively low salaries for school heads may discourage teachers from taking on the role (Pont, Nusche and Moorman, 2008[4]).

The salaries of school staff, and in particular teachers and school heads, represent the largest single cost in formal education (Chapter D4). Although competitive salaries are a factor in improved learning outcomes of students (OECD, 2020[5]), they are not the only factor. As such, it is important for policy makers to carefully consider the salaries and career prospects of teachers and school heads to ensure both high-quality education systems and sustainable education budgets.

Figure D3.1. Actual salaries of primary teachers relative to earnings of tertiary-educated workers (2024)

Ratio of salaries to the earnings of full-time, full-year workers aged 25-64



Note: Data refer to the ratio of annual average salaries (including bonuses and allowances) of teachers and school heads in public institutions relative to the earnings of workers with similar educational attainment (weighted average) and to the earnings of full-time, full-year workers with tertiary education. Earnings of workers with similar educational attainment to teachers are weighted by the distribution of teachers (or school heads) by qualification level (see Tables X2.10 and X2.11). As values close to one may be difficult to identify in the figure, please refer to the source table.

1. Data on earnings for full-time, full-year workers with tertiary education refer to the whole country.
2. Year of reference for salaries of teachers differs from 2024.

For data, see Table D3.2. For a link to download the data, see Tables and Notes section.

Other findings

- Teachers' salaries can range quite widely within countries, as different qualification levels can be associated with different salary scales. For primary teachers, the average salary for teachers at the top of the scale and with the maximum qualifications is 70% higher than the average starting salary for those with the minimum qualifications.
- School heads' actual salaries are more than 50% higher on average than those of teachers across primary and secondary education in OECD countries.
- Higher statutory salaries can be an incentive for teachers to become school heads; and most countries require candidates to meet minimum teaching experience levels and in some cases undergo additional management training.

Note

Statutory salaries are just one component of teachers' and school heads' total compensation. Other benefits, such as regional allowances for teaching in remote areas, family allowances, reduced rates on public transport and tax allowances on the purchase of instructional materials may also form part of their total remuneration. In addition, there are large differences in taxation and social benefits systems across OECD countries. There can also be substantial variation in salary scales of teachers and school heads at subnational level in some countries, based on local factors such as the cost of living (Box D3.1). This should be kept in mind when analysing teachers' salaries and making cross-country comparisons, along with potential comparability issues related to the data collected – see Box D3.1 of *Education at a Glance 2019* (OECD, 2019[6]), Box D3.2 of *Education at a Glance 2023* (OECD, 2023[7]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en) – and the fact that the data collected only cover public educational institutions.

All figures expressed in USD are converted from national currencies based on exchange rates that are adjusted for differences in purchasing power across countries (see *Methodology* section).

Analysis

Statutory salaries

Teachers' salaries can vary according to a number of factors, including their qualification levels, the level of education taught, and how much experience they have and what stage of their career they are in. They can also vary within countries if statutory salaries and compensation structures are defined at the subnational level (Box D3.1).

School heads' responsibilities may include educational activities (including teaching) as well as other administrative, staff management and financial responsibilities (see Chapter D4 in *Education at a Glance 2022* (OECD, 2022[8]) for more details, including differences in the nature of the work carried out and the hours worked by school heads compared to teachers). Similarities and differences in the tasks and responsibilities expected of school heads and teachers may explain differences in the compensation of school heads compared to teachers (Box D3.2).

Teachers' salaries

Teachers may enter the teaching profession with the minimum qualification or a higher qualification which may be associated with a higher salary. In about two-fifths of OECD countries and economies, teachers with the most prevalent qualification (to enter the teaching profession) have the same salary range as those with the minimum qualification required to become a teacher. In countries with different salary ranges for different qualification levels, very few teachers may hold the minimum or maximum qualifications (Annex Table X2.9). For this reason, the comparative analysis on statutory salaries focuses on teachers who hold the most prevalent qualifications. However, data on teachers' statutory salaries are collected for three qualification levels (minimum, most prevalent and maximum), available at the OECD Data Explorer (OECD, 2025[9]). Data on teachers' salaries at secondary level are collected only for teachers in general programmes although, exceptionally, the data for upper secondary teachers in vocational programmes were analysed in Box D3.3 in *Education at a Glance 2023* (OECD, 2023[7]).

For a given level of qualification, teachers' salaries vary according to years of experience. The OECD data collection on teachers' salaries gathers information on statutory salaries at four points on the salary scale: starting salaries, salaries after 10 years of experience, salaries after 15 years of experience and salaries at the top of the scale. The analysis usually concentrates on the salaries of teachers with 15 years of experience as a proxy for mid-career teachers.

Teachers' statutory salaries vary widely across countries. The salaries of primary teachers with the most prevalent qualifications after 15 years of experience range from USD 26 913 in the Slovak Republic to more than USD 90 000 in Germany, Luxembourg and the Netherlands (Table D3.1).

Typically, teachers' salaries increase with the level of education they teach. On average across OECD countries and economies, the salaries of teachers (with the most prevalent qualifications after 15 years of experience) range from USD 55 725 at pre-primary level to USD 59 673 at primary level, USD 61 563 at lower secondary level and USD 63 925 at upper secondary level (Table D3.1).

Salary differences between levels of education vary across countries. Notably, upper secondary teachers in Finland (with the most prevalent qualifications after 15 years of experience) earn 42% more than pre-primary teachers, and in Mexico, they earn 88% more. In Finland, these higher salaries at upper secondary level can be explained by the fact that upper secondary teachers need a higher qualification level than pre-primary teachers (for information on the most prevalent qualification see Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)). In Mexico, the difference is mainly driven by the fact that teachers at upper secondary level have a different salary structure to those at other levels. In contrast, teachers in about one-quarter of OECD countries and economies with available data earn the same salary irrespective of the level of education taught (Table D3.1).

Teachers' salaries usually increase with each year of experience. On average, it takes about 26 years for primary teachers (with the most prevalent qualification to enter the profession in 2024) to progress from the starting level to the top of the salary scale. In Canada, Colombia, New Zealand and Scotland (United Kingdom), salary scales are compressed to at most 10 years from starting to top of scale salaries (that is, faster salary progression over a few years), while others have more extended salary scales which give teachers more incentive to serve for longer. These different approaches mean teachers' salaries increase at different rates in different countries. For example, for primary teachers in both Japan and the Netherlands, statutory salaries at the top of the salary scale are about double the starting salaries (for those with the most prevalent qualification to enter the profession in 2024) but it will take a teacher in Japan on average 36 years to reach the top of the scale, compared to only 12 years for their counterpart in the Netherlands (OECD, 2025[9]).

Box D3.1. Subnational variations in teachers' and school heads' salaries at pre-primary, primary and secondary levels

Teachers' statutory salaries can vary significantly within countries, especially in federal countries where salaries may be defined at the subnational level. Differences in statutory or actual salaries can result, at least partly, from differences in the cost of living between subnational entities. Data provided by four OECD countries (Belgium, Canada, the United Kingdom and the United States) illustrate these variations at the subnational level.

The extent of the subnational differences in statutory salaries varies across these four countries, depending on the level of education and the stage teachers have reached in their careers. In 2024 in Belgium, for example, starting salaries for primary teachers differed by about 4% (USD 2 144), from USD 49 599 per year in the French Community to USD 51 743 in the Flemish Community. The largest differences were in Canada and the United States: starting salaries for primary school teachers varied in Canada by 42% (USD 19 995) across subnational entities (from USD 47 176 in Quebec to USD 67 171 in the Northwest Territories) and in the United States they varied by 52% (USD 21 293) across subnational entities, ranging from USD 41 189 in North Carolina to USD 62 482 in California. Starting salaries in secondary education varied the least in Belgium (by 4%, from USD 49 599 in the French Community to USD 51 743 in the Flemish Community at lower secondary level) and the most in the United States (by 67% at lower secondary level, from USD 41 088 in North Carolina to USD 68 537 in New York) (OECD, 2025[9]).

The variation in statutory salaries remains consistent across levels of education in Belgium, Canada (excluding pre-primary level) and the United Kingdom, but differs for different stages of teachers' careers in Canada and the United Kingdom. In Belgium, the variation in statutory salaries between subnational entities ranges from 3% to 7%. In contrast, in the United Kingdom, the variations are similar at different levels of education, but greater for starting salaries than for salaries at the top of the scale. For example, at lower secondary level, starting salaries in the United Kingdom varied by 28% (USD 11 155) between subnational entities (from USD 40 130 to USD 51 285), but had narrowed to 17% (USD 10 463, from USD 62 025 to USD 72 488) at the top of the scale. In Canada, variations are similar at primary and secondary levels but vary between stages of the career. The difference reaches 42% (USD 19 995) for starting salaries, 66% (USD 43 312) for salaries after 10 years of experience, 49% (USD 35 710) for salaries after 15 years of experience, and 60% (USD 44 134) for salaries at the top of the salary scale.

In the United States, there was no clear pattern in the size of the variation of statutory salaries across subnational entities at different stages of teachers' careers and levels of education. At lower secondary level, the difference was the smallest for starting salaries, described above, and the widest for salaries after 15 years of experience, ranging from USD 53 355 to USD 102 640 (a difference of 92%, or USD 49 285) rather than for salaries at the top of the scale. The variation of the salaries after 15 years of experience across subnational entities is the largest at primary level (a difference of 99%) and the smallest at upper secondary level (a difference of 83%).

There are also large subnational variations in the actual salaries of teachers and school heads across the three countries with available data in 2024. In Belgium, the subnational variation in actual salaries was less than 13% for all levels of education for both teachers and school heads, and greater for school heads than for teachers. For example, at upper secondary level, teachers' salaries in Belgium ranged from USD 86 171 in the French Community to USD 89 559 in the Flemish Community, a difference of 4%, or USD 3 388. In comparison, school heads' salaries ranged from USD 121 213 in the French Community to USD 136 271 in the Flemish Community, a difference of 12%, or USD 15 058. Subnational variations in actual salaries were slightly bigger for teachers at lower and upper secondary levels in the United Kingdom and much larger for both teachers and school heads in the United States, where the average salaries of upper secondary school heads ranged from USD 92 037 in Arkansas to USD 157 964 in New York, a difference of 72%, or USD 65 927.

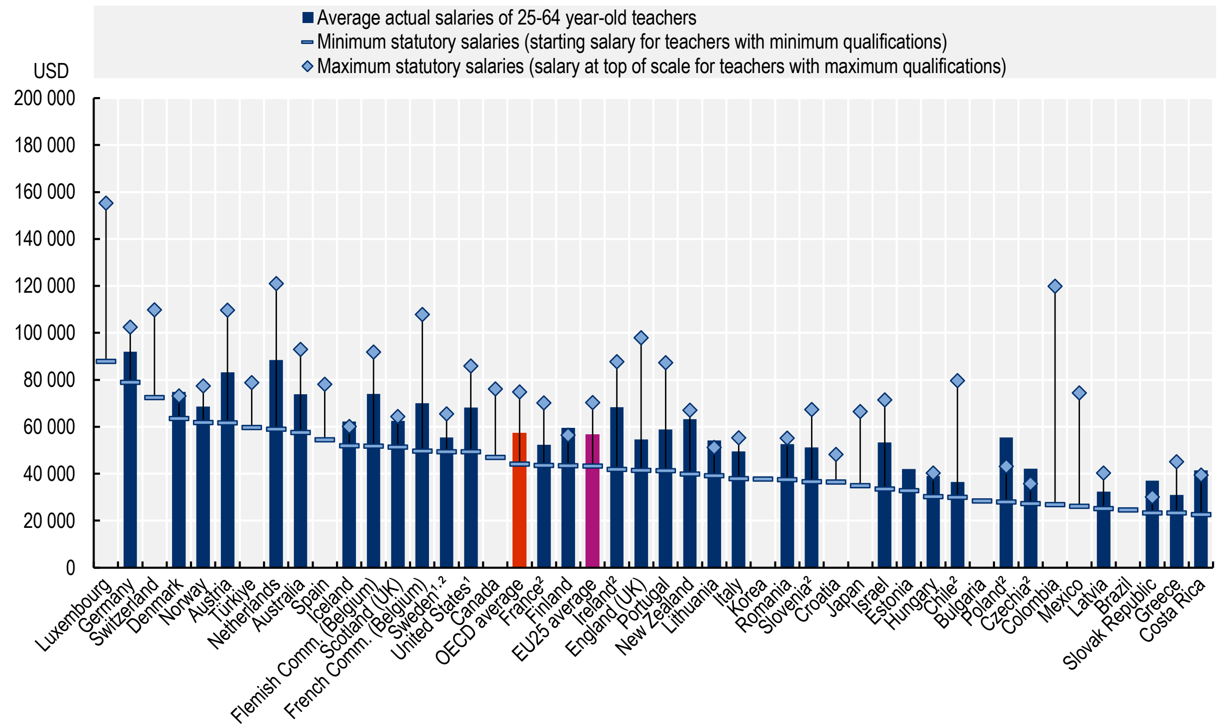
The extent of the subnational variation in teachers' and school heads' actual salaries also varies according to level of education. In the United Kingdom, the subnational variation in salaries of school heads is largest at secondary level, while for teachers the variation is greater at pre-primary and primary levels. In the United States, subnational variation in the average actual salaries of school heads was greater at primary level than at lower and upper secondary levels.

Source: Education at a Glance Database, https://data-explorer.oecd.org/.

Looking at the full range of statutory salaries (where the minimum is the starting salary for teachers with the minimum qualifications and the maximum is the salary at the top of the scale for teachers with the maximum qualifications), on average the maximum teacher's salary in primary education is 70% higher than the minimum across OECD countries and economies. However, the difference varies greatly across countries, from about 15% more in Denmark to more than four-fold in Colombia (Figure D3.2). Maximum salaries are at least double minimum salaries in eight other OECD countries and economies. These variations may signal differences in salary structures. For instance, Denmark has only one salary range irrespective of teachers' qualifications, while Colombia has different salary ranges for teachers with different qualification levels.

Figure D3.2. Primary teachers' average actual salaries compared to the statutory minimum and maximum salaries (2024)

Annual salaries of teachers in public institutions, in equivalent USD converted using PPPs for private consumption



Note: Actual salaries include bonuses and allowances.
1. Actual salaries for minimum and maximum statutory salaries.
2. Year of reference for actual salaries differs from 2024.
For data, see Table D3.3. For a link to download the data, see Tables and Notes section.

In most countries and economies where minimum salaries are below the OECD average, the maximum salaries are also below the OECD average. At primary level, a notable exception is Colombia, where minimum salaries are 39% lower than the OECD average, but maximum salaries are 60% higher. These differences may reflect the different career paths available to teachers with different qualifications (Figure D3.2).

The difference between maximum salaries (which may only apply to a very small proportion of teachers) and the salaries of teachers with the most prevalent qualifications and 15 years of experience, also varies across countries. At primary level, the gap between these two groups is less than 10% in seven countries and economies (Denmark, Finland, Germany, New Zealand, Poland, Romania and Scotland [United Kingdom]) while it exceeds 60% in three others (Chile, Colombia and Portugal) (Figure D3.2 and Table D3.1).

Trends in teachers' statutory salaries since 2015

Nearly two-thirds of OECD countries have comparable data on the statutory salaries of teachers for both 2015 and 2024 for at least one level of education, based on teachers with the most prevalent qualifications after 15 years of experience. During this period, teachers' statutory salaries increased in real terms (that is, in constant 2015 prices) in one-half to three-fifths of these countries depending on the level of education. On average across OECD countries and economies with comparable data, statutory salaries increased by about 6% at primary level, 4% at lower secondary level (general programmes) and 5% at upper secondary level (general programmes), rewarding staying in the teaching profession (Table D3.7, available on line).

However, some countries saw much larger changes in statutory salaries over this period. At primary level, they grew by more than 20% in real terms in Chile, Colombia, Lithuania and Poland. The nominal increases were even larger, but inflation has cancelled out some of the nominal wage gains over the period (OECD, 2022[10]). In contrast, in 13 countries and economies, real statutory salaries of primary teachers have fallen since 2015. The largest decrease was in Ireland where salaries fell by 10% in real terms although in nominal terms (that is, in current values, not considering inflation), salaries remained stable between 2015 and 2024 (Annex Table X2.6 and Table D3.7, available on line).

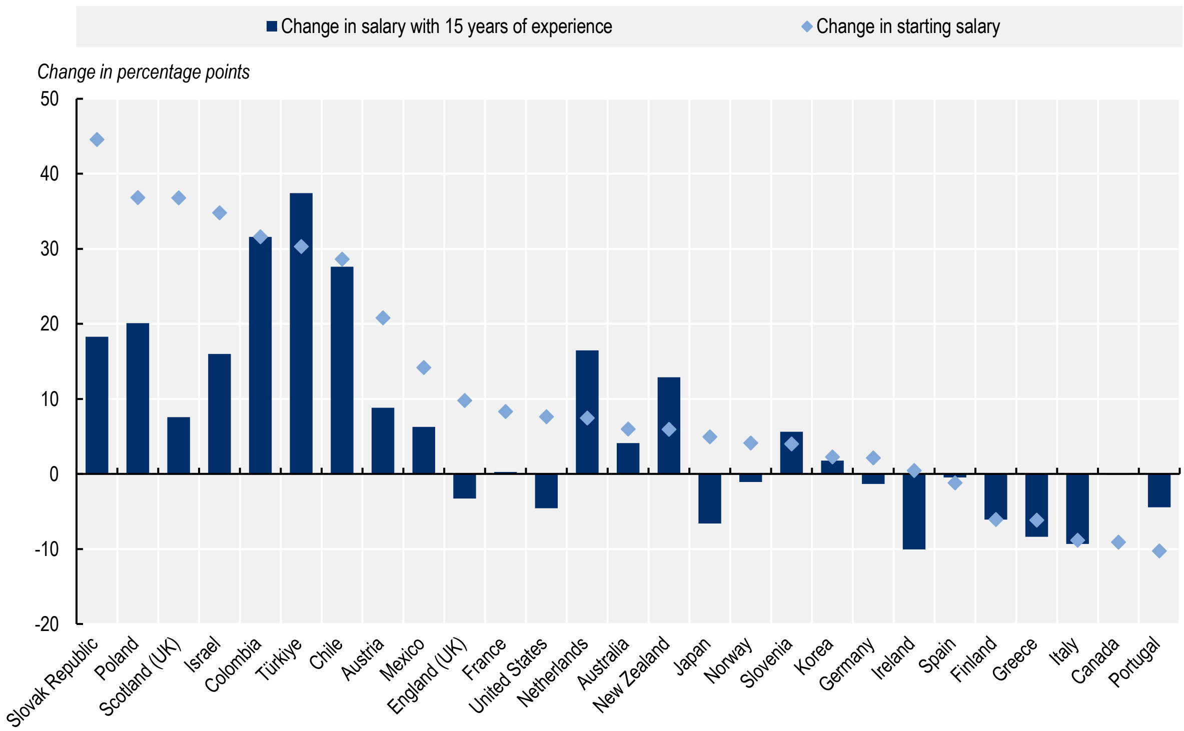
Starting salaries also increased during the period 2015-24. On average across OECD countries and economies with comparable data over the period, starting statutory salaries rose in real terms by 17% at primary level, by 16% in lower secondary (general programmes) levels and by 14% at upper secondary (general programmes) level, making it more attractive to enter the profession (Table D3.5, available on line). Again, these changes vary widely between countries. In more than two-thirds of OECD countries and economies starting statutory salaries increased in real terms. However, in few countries, salaries decreased significantly, and by 10% or more in Costa Rica and Portugal (Table D3.6, available on line).

In countries with available data for the period 2015 to 2024 for both starting salaries and salaries after 15 years of experience, the variation in statutory salaries is not necessarily similar at these two stages of the career. In most of the 27 countries and economies with available data, salaries at both stages either increased or decreased for primary school teachers. However, in a few countries (England [United Kingdom], Germany, Japan, Norway and the United Sates), starting salaries increased during the period while those for teachers with 15 years of experiences decreased. In these countries, neither the increase nor the decrease exceeded 10 percentage points (Figure D3.3). These changes resulted from a combination of changes in nominal salaries and changes in the cost of living – in these countries, for example, nominal salaries in current national currencies increased at both stages of the career (Annex Tables X2.5 and X2.6).

In countries and economies where salaries at both stages of teachers' careers increased or decreased between 2015 and 2024, the extent of the variation usually differed for starting salaries and for salaries after 15 years of experience. In most of the countries where salaries increased in real terms for both stages, the increase was larger for starting salaries. In the countries where salaries decreased in real terms for both stages, there is no clear trend as to which saw the greatest drop. In a few countries, such as Finland, Italy and Spain the change was the same for both stages (Figure D3.3). These differences in salary trends for teachers at different stages of their careers need to be interpreted with caution, as they result from the combination of changes in nominal salaries and changes in prices, but they may also highlight changes in the compensation systems for teachers to attract or retain teachers in the profession (see Chapter D8).

Figure D3.3. Change in primary teachers' statutory salaries between 2015 and 2024

Change in teachers' real statutory salaries (2015 = 100), in percentage points



Note: Change in teachers' statutory salaries is based on the most prevalent qualifications after 15 years of experience, converted to constant prices using deflators for private consumption.
For data, see Tables D3.6 and D3.7 (available on line). For a link to download the data, see Tables and Notes section.

School heads' statutory salaries

Some countries have specific salary scales for school heads, who may or may not receive a school-head allowance on top of their statutory salaries. In other countries, heads may be paid according to teachers' salary scales, with an additional school-head allowance. The use of teachers' salary scales may reflect the fact that school heads may be teachers who have taken on management responsibilities of a school, possibly accompanied by a reduction in their teaching responsibilities (see Box D3.2). In 15 out of the 36 countries and economies with data available, primary school heads are paid according to teachers' salary scales with a school-head allowance, while they have a specific salary range in the other 21. Of these, 16 countries and economies have no specific school-head allowance and 5 include a school-head allowance in the salary (Table D3.13, available online).

The amounts payable to school heads (through statutory salaries and/or school-head allowances) may vary according to the characteristics of the school or schools they lead, such as the size of the school (based on the number of students or teachers). They could also vary according to the individual characteristics of the school heads themselves, such as the duties they have to perform or their years of experience (for the determinants of statutory salary and school-head allowance, see Table D.D3.5 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* – (https://doi.org/10.1787/fcfaf2d1-en)).

Considering the large number of criteria involved in the calculation of their salaries, the statutory salary data for school heads focus on those related to the minimum qualification requirements to become a school head, and Table D3.4 (available on line) shows only the minimum and maximum salaries (see the minimum qualification requirements in Table D.D3.6 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* –

(https://doi.org/10.1787/fcfaf2d1-en)). Caution is therefore necessary when interpreting these values because minimum and maximum statutory salaries may refer to school heads in different types of schools and few school heads may earn these amounts in practice.

As with teachers, school heads' salaries also vary widely across countries and levels of education. More than half of OECD countries and economies have similar pay ranges for primary and lower secondary school heads, while upper secondary school heads benefit from higher statutory salaries on average. The similar salaries at primary and lower secondary levels may result from the fact that school heads in many of these countries are in charge of schools providing both primary and lower secondary education (Table D3.4, available on line).

At primary level, the minimum salary for school heads is USD 62 092 across OECD countries and economies, ranging from USD 22 105 in Costa Rica to USD 110 847 in Italy. The maximum salary is USD 100 027 on average, ranging from USD 48 866 in Poland to USD 176 533 in England (United Kingdom) (Figure D3.4).

On average across OECD countries and economies, the maximum statutory salary of a school head with the minimum qualifications is 73-78% higher than the minimum statutory salary at primary and secondary levels. In ten countries and economies school heads at the top of the scale can expect to earn at least twice the statutory minimum salary in at least one of these levels of education; in Colombia and Costa Rica, they can even expect to earn more than three times the minimum salary at all levels of education (Table D3.4, available on line).

Actual salaries

Teachers' actual salaries

Teachers' actual salaries include all work-related payments, such as the base salary (as defined in the statutory salary scale), results-related bonuses, extra pay for holidays, allowance for performing certain tasks and other additional payments (see *Definitions* section). For example, Czechia has implemented a range of allowances, including additional payments for student counselling and payments for completing continuous professional development activities, and the payments are at the discretion of the school head. In Switzerland, allowance payments are less frequent or replaced by alternative benefits – the training of student teachers leads to a reduction in teaching time, for example. Across OECD countries and economies, in 2024, the average actual salaries of teachers aged 25-64 were USD 50 872 at pre-primary level, USD 57 399 at primary level, USD 59 896 in general programmes at lower secondary level and USD 63 514 in general programmes at upper secondary level (Table D3.3).

Bonuses and allowances can be a significant addition to statutory salaries. At primary level, 30 countries and economies have data available on both the statutory salaries of teachers with the most prevalent qualifications after 15 years of experience (a proxy for mid-career salaries) and the actual average salaries of 25-64 year-old teachers. In more than one-third of these countries, actual average salaries are at least 10% higher than statutory salaries, which may reflect the importance of bonuses and allowances in the compensation system for teachers in these countries. Actual salaries are more than 25% higher than statutory salaries (after 15 years of experience) in Costa Rica (27%), Czechia (39%), Poland (34%) and the Slovak Republic (37%) (Tables Table D3.1 and Table D3.3).

Comparing teachers' actual salaries to minimum and maximum statutory salaries also gives an indication of the distribution of teachers between the minimum and maximum salary levels. For example, at primary level in Norway, the actual salaries of 25-64 year-old teachers are 11% higher than the minimum statutory salary, which is the smallest difference among countries with available data on both measures for the same reference year (Figure D3.2). This may be due to Norway's relatively small range of statutory salaries (Table D3.1), combined with smaller additional allowances than in other countries. Meanwhile in Poland and the Slovak Republic, actual salaries are at least 20% higher than the statutory salary at the top of the scale (the largest differences among countries with comparable data), suggesting that allowances have a substantial effect on teachers' take-home pay (Figure D3.2 and Table D3.8, available on line).

Over the period 2015 to 2024, nearly half of OECD countries and economies have comparable time series data for actual salaries at primary and secondary levels of education (for pre-primary level it is about one-third of OECD countries and economies). On average across OECD countries and economies with comparable data for all the reference years between 2015 and 2024, actual salaries in real terms increased by about 15% at primary level, 14% at lower secondary level and 13% at upper secondary level. About two-thirds of these countries showed an increase (in real terms) for all levels of education. The increase exceeded 20% in Estonia, Iceland (at pre-primary level), Latvia and the Slovak Republic, and actual salaries doubled in Lithuania. These differences may result from the combination of changes in the amounts of statutory salary or allowances that teachers received as well as changes in teachers' characteristics (for example, more experienced teachers may earn higher salaries) (Table D3.8, available on line).

In five OECD countries and economies with comparable time series data, the actual salaries of teachers in all levels of education (with available data) fell in real terms. They decreased by at least 3% in Austria (at secondary levels), the French Community of Belgium (at upper secondary level) and Norway (at upper secondary level) and Portugal (at pre-primary level). As most countries showed increases in nominal terms, these falls were driven by the rate of inflation outstripping increases in actual salaries (Table D3.8, available on line).

School heads' actual salaries

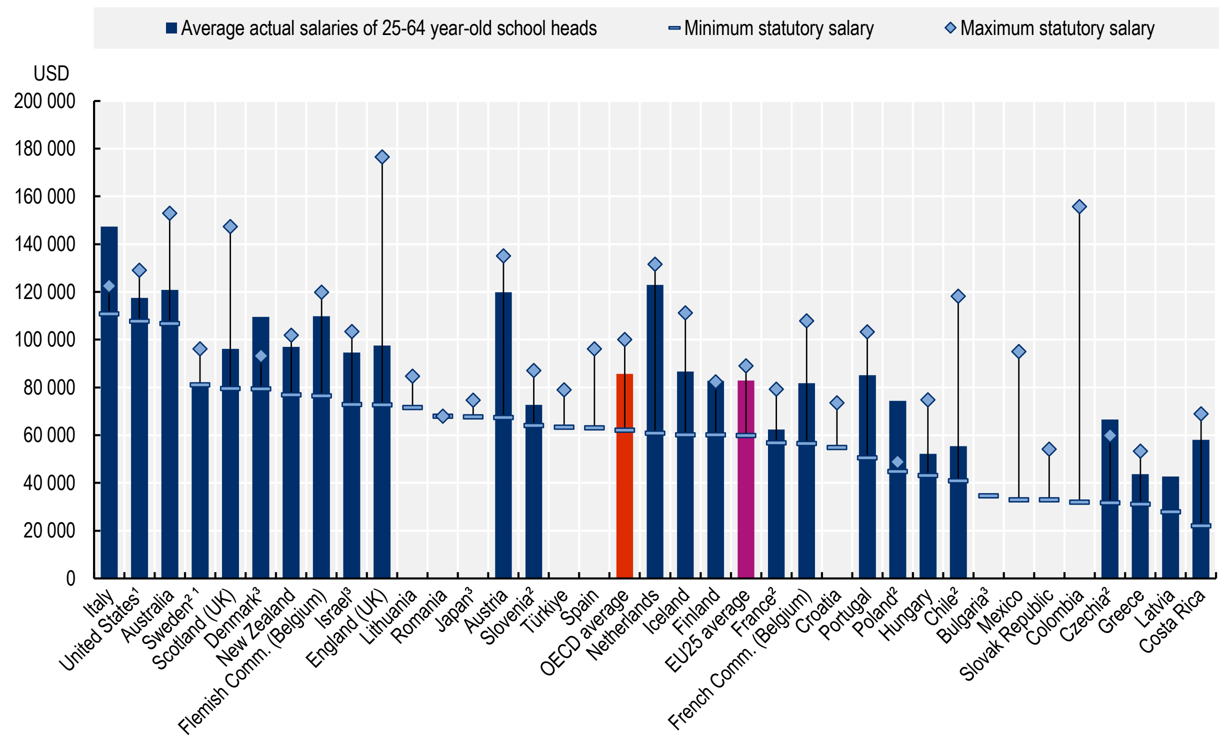
Across OECD countries and economies, average actual salaries for school heads (aged 25-64) ranged from USD 85 711 at primary level to USD 92 866 at lower secondary level and USD 99 211 at upper secondary level. School heads' actual salaries are higher than those of teachers, and the premium (the difference in actual salaries between school heads and teachers in favour of school heads) increases with levels of education. On average across OECD countries and economies with data for both teachers and school heads, school heads' actual salaries in 2024 were 51% higher than teachers' at primary level, 56% higher at lower secondary level and 57% higher at upper secondary level (Table D3.3).

The premiums paid to school heads vary widely across countries and levels of education, however. At pre-primary level, the largest difference was in Slovenia, where school heads' actual salaries are 83% higher than those of teachers. At the primary level, school heads' actual salaries are almost three times teachers' actual salaries in Italy. At lower and upper secondary levels, school heads' actual salaries are about twice or more those of teachers in England (United Kingdom), Italy and Scotland (United Kingdom). The lowest premiums, of less than 30%, are in Costa Rica (secondary), Estonia (primary and secondary), France (pre-primary and primary), the French Community of Belgium (pre-primary, primary and upper secondary) and Norway (pre-primary) (Table D3.3).

The reasons for these different salary structures are manifold. In France, the low premiums can be explained by the fact that pre-primary and primary school heads are teachers relieved from part of their teaching duties. They are paid according to the teachers' salary scale at this level of education, with the addition of a specific school-head allowance. In Costa Rica, school heads' actual salaries are similar across education levels with a difference of 18% between the lowest average actual salary (primary level) and the largest (secondary). Meanwhile teachers' salaries are 27% lower for primary and pre-primary levels compared to secondary levels, leading to smaller differences in secondary education between teachers and school heads.

Figure D3.4. Primary school heads' average actual salaries compared to the statutory minimum and maximum salaries (2024)

Annual salaries of school heads in public institutions, in equivalent USD converted using PPPs for private consumption



Note: Actual salaries include bonuses and allowances.
1. Actual base salaries for statutory minimum and maximum salaries.
2. Year of reference for actual salaries differs from 2024.
3. Data exclude management allowances that are considered a part of school heads' statutory salaries.
For data, see Table D3.3 and Table D3.4, available on line. For a link to download the data, see Tables and Notes section.

Box D3.2. From teacher to school head positions: Salaries and pathways

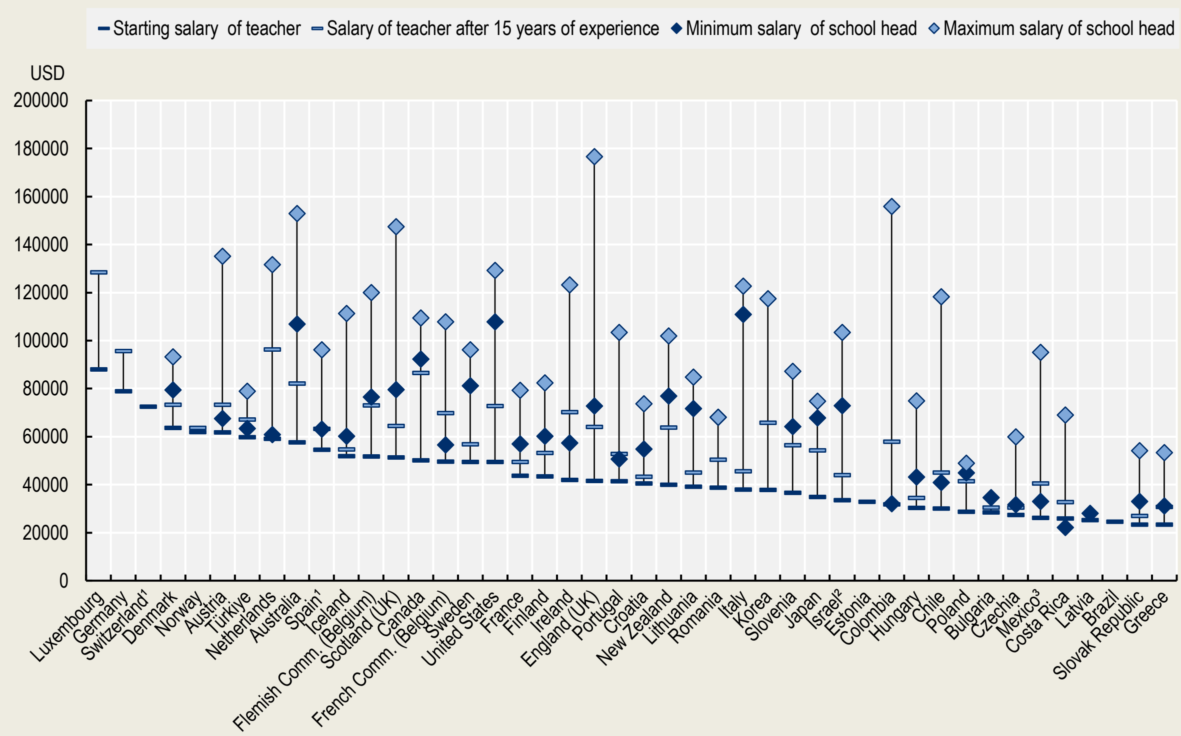
Becoming a school head can be an opportunity for teachers to develop professionally, take on leadership roles and potentially improve their salary prospects. Job satisfaction is positively linked with participation in decision making and professional development, leading to an intrinsic motivation (OECD, 2020[11]). The extent of the difference in salaries also provides an incentive for teachers to become school heads. Higher salaries are a way to attract candidates for school head roles but also reflect the additional workload and greater responsibilities of the position. Thus, higher salaries earned by school heads also signal more complex working environments.

On average across OECD countries and economies, school heads' minimum salaries are 49% higher than teachers' minimum salaries at primary level. Minimum statutory salaries for school heads with the minimum qualifications are higher than the starting salaries of teachers (with the most prevalent qualification at that level) in nearly all OECD countries and economies. The only exception is Costa Rica, where the minimum salary for a school head is 15% lower than the starting salary of a teacher with most prevalent qualification, but the minimum qualification requirement for school heads is also lower than the most prevalent qualification to become a teacher. The minimum statutory salary for school heads is also often higher than the salaries of teachers with the most prevalent qualification after 15 years experience. At primary level, this is the case in two-thirds of OECD countries and economies (Figure D3.5).

The maximum statutory salaries for school heads are higher than the salaries for teachers with 15 years experience in all OECD countries and economies with available data. At the primary level, the maximum statutory salary of a school head is 83% higher on average than for teachers with 15 years of experience (and the most prevalent qualifications). In nearly one-third of countries and economies (11 out of 36), school heads' maximum salaries are more than twice statutory teachers' salaries after 15 years of experience (Figure D3.5).

Figure D3.5. Statutory salaries of teachers and school heads at primary level (2024)

Statutory salaries of teachers with most prevalent qualification and school heads with minimum qualification in public institutions, in equivalent USD converted using PPPs for private consumption



1. Weighted average of the statutory salaries across different subnational entities.
2. In practice, many teachers obtain higher tertiary degrees during their service and are placed in a higher salary range.
3. Combination of different salary scales for the same ISCED qualification requirement.
For data, see Table D3.1 and Table D3.4, available on line. For a link to download the data, see Tables and Notes section.

Mandatory training or proven skills in management can help prospective school heads to act more effectively in leadership and ease the way into the profession. However, Denmark, England (United Kingdom) and Greece for example, do not require school heads to have any training or proof of skills ahead of entering the position. School heads also advise in matters related to students' learning so it is important that they understand the work of teachers (Pont, Nusche and Moorman, 2008[4]). Although most countries require heads to have teaching experience, in Finland and Latvia there is no minimum requirement, but both countries state that either sufficient experience should be provided or local governments can set up differing standards. In Denmark, school heads must take a leadership diploma after entering the position.

Prior teaching experience is mandatory to become a school head in 26 countries and economies at the primary level, and in 27 countries and economies at secondary levels. On average across OECD countries and economies, teachers are required to have a minimum of five years of experience in education before being eligible for a school head position, with most requiring between three and six years. In Greece, this rises to 12 years, of which a minimum of 8 years must be teaching in classrooms. At the primary level in France and at all levels in Luxembourg, teachers are eligible to become school heads after two years of experience. However, in practice school heads tend to have more than the minimum required experience (OECD, 2022[8]).

Mandatory trainings or competitive examinations proving the eligibility of teachers exist in most countries and economies with data available. Such training takes different forms across countries. Several countries and economies require specific training either before taking up or after starting a school head position. Examinations assessing administration and management skills are also common. In France, new school heads in pre-primary and primary schools benefit from tutoring by an experienced head teacher. The Flemish and French Communities of Belgium combine different forms of training with assessments of new school heads at regular intervals.

Countries which do not have a statutory training requirement for new school heads still commonly provide training programmes and encourage candidates to complete them. In Denmark, it is general practice for school heads at primary and secondary levels to have completed professional development courses. In Norway, school heads are also encouraged to engage in additional training programmes.

Base salaries and additional payments: Incentives and allowances

Statutory salaries, based on pay scales, are only one component of the total compensation of teachers and school heads. School systems may also offer them additional payments, such as allowances, bonuses or other rewards. These may take the form of financial remuneration and/or reductions in the number of teaching hours. Decisions on the criteria used for the formation of the base salary and additional payments are taken at different levels of authority.

Criteria for additional payments vary across countries. In the large majority of countries and economies, teachers' core tasks (teaching, planning or preparing lessons; marking students' work; general administrative work; communicating with parents; supervising students; and working with colleagues) are rarely compensated through specific bonuses or additional payments. Teachers may also be required to take on other responsibilities or perform some tasks without additional compensation although doing so often entails some sort of financial incentive (see Chapter D4 in *Education at a Glance 2024* (OECD, 2024[12]) for teachers' tasks and responsibilities and associated financial or other incentives).

At primary level, teachers who participate in school or other management activities in addition to their teaching duties receive extra financial compensation in nearly 60% of the countries and economies with available information. For example, in Italy teachers serving as head of department or co-ordinator receive an annual payment. In contrast, in Latvia teachers in administrative positions such as deputy school heads are compensated with reduced teaching duties. It is also common for teachers to be awarded additional payments, either annual or occasional, for teaching more classes or hours than required by their full-time contract or performing special tasks such as training student teachers (Table D3.9, available on line).

Participation in mentoring programmes and/or supporting new teachers in induction programmes, as well as outstanding performance can also lead to additional compensation, either in the form of occasional additional or annual payments, or through increases in base salary. Additional payments can also include bonuses for specific teaching conditions, such as teaching students with special needs in regular schools or teaching in disadvantaged, remote or high-cost areas. For example, in Japan three different location allowances have been implemented to retain high-quality teachers in remote areas, to help teachers cover heating costs in cold areas and to provide additional payments in high-cost areas (see also Box D3.3 in *Education at a Glance 2024* (OECD, 2024[12]) for more information on such allowances).

There are also criteria for additional payments for school heads, but fewer tasks or responsibilities lead to additional payments compared to teachers. Central/state government or top-level authorities and local authorities are the two main decision-making authorities on the entitlement criteria and the amounts of the allowances for school heads across countries (Tables D3.10 and D3.12, available on line).

Salaries relative to other tertiary-educated workers

Education systems compete with other sectors of the economy to attract high-quality graduates as teachers and to retain them in the profession. Teachers' salaries relative to other occupations with similar education requirements, and their likely future earnings, may have an influence on whether individuals choose a teaching career (Nagler, Piopiunik and West, 2020[2]) or to stay in the profession (Qin, 2020[3]).

In most OECD countries, a tertiary degree is required to become a teacher at all levels of education (see Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* – (https://doi.org/10.1787/fcfaf2d1-en)), meaning that the likely alternative to initial teacher education would be a similar tertiary programme. Thus, teachers' relative salary levels and labour-market conditions in different countries can be understood by comparing teachers' actual salaries with the average earnings of other tertiary-educated professionals.

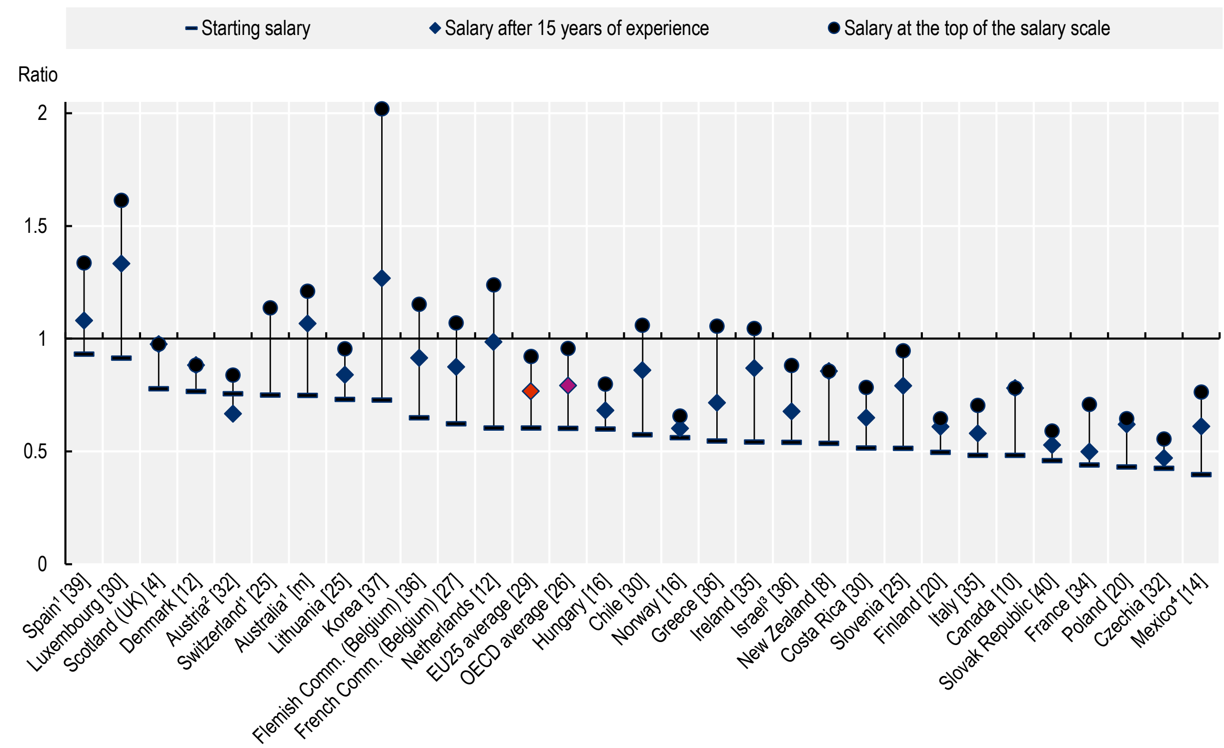
Two comparisons can be made. First, with tertiary-educated workers: full-time, full-year 25-64 year-old workers with tertiary attainment (ISCED levels 5 to 8). Second, with similarly educated workers, weighted by the proportion of teachers at each level of tertiary attainment. This second method ensures that comparisons between countries take into account differences in the distribution of bachelor's, master's and doctoral or equivalent attainment among teachers compared to tertiary-educated workers more generally (see Annex Table X2.10 for the proportions of teachers by attainment level, *Methodology* section for more details and Box D3.3 for comparability issues related to measuring teachers' relative salaries).

Young graduates may consider teachers' statutory salaries relative to earnings of similarly educated workers over the course of their careers when considering teaching as a lifelong career (for earnings by field of study in tertiary education see Indicator A4 in *Education at a Glance 2022* (OECD, 2022[8])). Data for primary teachers with the most prevalent qualification to enter the profession in 2024 are available for 29 OECD countries and economies. On average, teachers' starting salaries in these countries and economies are 60% of the average earnings of similarly educated workers aged 25-64, while those at the top of the scale reach 97% of the average earnings of similarly educated workers (Figure D3.6).

In a few countries and economies, teachers' statutory salaries do reach or exceed the earnings of similarly educated workers. In Korea and Luxembourg, statutory salaries after 15 years of experience are at least 25% higher than the average earnings of similarly educated workers – and at least 60% higher for teachers at the top of the salary scale (Figure D3.6). In the countries where teachers' salaries do not exceed the average earnings of similarly educated workers at any stage in their career, the most prevalent qualifications are usually a master's degree (Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* – (https://doi.org/10.1787/fcfaf2d1-en)).

Figure D3.6. Primary teachers' statutory salaries at different stages of their career relative to earnings of similarly educated workers (2024)

Ratio of salaries of teachers with the most prevalent qualification at the time of entry in public institutions relative to the earnings of full-time, full-year workers aged 25-64 with similar educational attainment



Note: The number in square brackets refers to the average number of years needed to progress from the starting salary to the top of the salary scale.
1. Weighted average of the statutory salaries across different subnational entities.
2. Starting salary is relative to the earnings of workers who have attained a bachelor's degree or equivalent (ISCED 6). Salaries after 15 years of experience and at the top of the salary scale are relative to the earnings of workers with a master's degree or equivalent (ISCED 7) or higher attainment.
3. In practice, many teachers obtain higher tertiary degrees during their service and are placed in a higher salary range.
4. Combination of different salary scales for the same ISCED qualification requirement.
For a link to download the data, see Tables and Notes section.

Where teachers' salary scales are compressed, their relative pay may increase faster. For example, the starting salaries of primary teachers in New Zealand with the most prevalent qualification are just 54% of the average earnings of similarly educated workers, but will reach 86% after eight years on average. In contrast, relative starting salaries in Chile are similar (57%), but Chile has more expanded salary scales so it takes 15 years to reach 86% of the average earnings of similarly educated workers, and teachers' salaries continue increasing until they have 30 years of experience in the profession (Figure D3.6).

Similarly to statutory salaries, teachers' average actual salaries, which reflect their total earnings, can be compared against either the earnings of similarly educated workers or all tertiary-educated workers. However, the data available only allow for the computation of averages of relative salaries when actual salaries of teachers are compared to earnings of tertiary-educated workers. Box D3.3 considers the comparability issues involved in calculating relative salary measures.

In almost all countries and economies with available information, and at almost all levels of education, teachers' actual salaries are lower than those of tertiary-educated workers. On average, primary teachers' actual salaries amount to 83% of the full-time, full-year earnings of tertiary-educated 25-64 year-olds (Figure D3.1). Lower secondary teachers earn 87% of this benchmark and upper secondary teachers 91%. The lowest relative salaries are at pre-primary level in Czechia with 57% of average earnings of tertiary-educated workers (although no tertiary education is required to become a teacher at pre-primary level) (Table D3.2).

Teachers' actual salaries reach or exceed those of tertiary-educated or similarly educated workers on average in a few countries. Teachers earn more than tertiary-educated workers at all levels of education in Costa Rica, Peru, Portugal and Romania. The actual salaries of teachers exceed the earnings of tertiary educated workers by more than 50% in Costa Rica (at secondary level) and Peru (at primary level) (Table D3.2).

School heads' career prospects and their relative salaries are also a signal to teachers of their potential career progression pathway and the associated compensation in the longer term. Not only do school heads earn more than teachers, they also, unlike teachers, typically earn more than tertiary-educated workers. A notable exception is Hungary, where school heads at all levels of education earn 8-18% less than the average earnings of tertiary-educated workers, the lowest among OECD countries (Table D3.2).

Box D3.3. Comparability issues with relative salaries of teachers

Meaningful international comparisons rely on the provision and implementation of rigorous definitions and a related statistical methodology. In view of the diversity of countries' education and teacher compensation systems, adhering to these guidelines and methodology is not always straightforward. Some caution is therefore required when interpreting these data.

The relative salaries measure divides the salaries of teachers or school heads (numerator) by the earnings of comparable workers (denominator) using two different methods (see Table D3.2 and *Methodology* section). These measures of relative salaries are subject to biases due to differences in the characteristics, working patterns and remuneration systems of teachers and other workers or differences in the data used for salaries and earnings. Box D3.1 in *Education at a Glance 2021* (OECD, 2021[13]) addressed comparability issues related to inclusion of teachers in data on earnings of workers, the focus on full-time work, differences in sources for data on salaries and earnings, and differences in pension systems between teachers and other workers. Box D3.2 in *Education at a Glance 2023* (OECD, 2023[7]) addressed the bias related to differences in working days between teachers and tertiary-educated workers.

Another source of potential biases in the measure of relative salaries relates to differences in the type of measure used for salaries and earnings data: the median earnings of tertiary-educated workers are compared to an arithmetic mean of the actual salaries of teachers. To analyse the potential bias related to the use of median or mean actual salaries, a survey was carried out in 2024 to gather information on the statistical measure (mean or median) used to report actual teacher salaries. The survey also gathered information on the methodology used to report actual salaries, and in particular on whether the data refer to full-time teachers.

Results from the 24 countries and economies that contributed to the survey show that the median is more relevant than the mean as the distribution of salaries can include a few very high salaries (right-skewed distribution of salaries). As the median is less sensitive to extreme or outlying values than the arithmetic mean, the measure of relative salaries is more stable over years when computed based on median values. However median actual salaries are not available for most countries. Nine countries provided both mean and median actual salaries of teachers enabling an analysis of the difference in the value of relative salaries resulting from the use of mean or median actual salaries. The results show sizeable differences: the difference between the ratios based on mean and median actual salaries of teachers varies from 0.1% to 14%, with similar differences across levels of education.

At upper secondary level the ratio based on mean actual salaries is higher than the ratio based on median actual salaries in most of the countries with available data, but this is not necessarily the case at all levels.

The results of the survey also showed that teachers with part-time working arrangements are included in actual teacher salaries in the majority of countries that participated in the survey (whereas data should be reported for full-time teachers). Weighting systems are usually used to convert part-time salaries into full-time equivalent salaries and mitigate this bias. However, the weights may be computed differently across countries: based on the teaching time or the working time of full-time teachers, the working time of full-time workers or other methods. The differences in the methods to weight salaries of teachers with partial working arrangements may create also some bias in the comparison of relative salaries.

Source: 2024 OECD survey on methodology to report actual salaries of teachers.

Definitions

Teachers refer to professional personnel directly involved in teaching students. The classification includes classroom teachers and other teachers who work with a whole class of students in a classroom, in small groups in a resource room, or in one-to-one teaching situations inside or outside a regular class.

School head refers to any person whose primary or major function is heading a school or a group of schools, alone or within an administrative body such as a board or council. The school head is the primary leader responsible for the leadership, management and administration of a school.

Actual salaries refer to the annual average earnings received by full-time teachers/school heads aged 25-64 before taxes. It is the gross salary from the employee's point of view: it includes the part of social security contributions and pension-scheme contributions that are paid by the employees (even if deducted automatically from the employees' gross salary by the employer). However, the employers' premium for social security and pension is excluded. Actual salaries also include work-related payments, such as school-head allowance, annual bonuses, results-related bonuses, extra pay for holidays and sick-leave pay. Income from other sources, such as government social transfers, investment income and any other income that is not directly related to their profession is not included.

Earnings for workers with tertiary education are average earnings for full-time, full-year workers aged 25-64 with an education at ISCED level 5, 6, 7 or 8.

Salary at the top of the scale refers to the maximum scheduled annual salary (top of the salary range) for a full-time teacher (for a given level of qualification of teachers recognised by the compensation system).

Salary after 15 years of experience refers to the scheduled annual salary of a full-time teacher. Statutory salaries may refer to the salaries of teachers with a given level of qualification recognised by the compensation system (the minimum training necessary to be fully qualified, the most prevalent qualifications or the maximum qualification), plus 15 years of experience.

Starting salary refers to the average scheduled gross salary per year for a full-time teacher with a given level of qualification recognised by the compensation system (the minimum training necessary to be fully qualified or the most prevalent qualifications) at the beginning of the teaching career.

Statutory salaries refer to scheduled salaries according to official pay scales. The salaries reported are gross (total sum paid by the employer) less the employer's contribution to social security and pension, according to existing salary scales. Salaries are "before tax" (i.e. before deductions for income tax). Statutory salaries also include additional payments that all teachers or school heads receive and that constitutes a regular part of the annual salary, such as 13th month pay. In the case of school heads, statutory salaries include the management allowance that all school heads receive for managing the school where applicable.

Methodology

Data on teachers' salaries at lower and upper secondary level refer only to general programmes.

In most countries, the criteria to determine the most prevalent qualifications of teachers are based on a principle of relative majority (i.e. the level of qualifications of the largest proportion of teachers).

The period of reference for teachers' salaries is the school year 2023/24 where the school year begins on the second half of the calendar year 2023 and ends in the first half of the calendar year 2024, or otherwise, the school year 2024 where the school year starts in the first half of the calendar year 2024. For ease of reference in the publication, the reference school year is given as 2024.

Salaries were converted into equivalent USD using purchasing power parities (PPPs) for private consumption from the OECD Data Explorer on national accounts (OECD, 2025[14])These PPPs refer to the calendar year and have been adjusted to refer to January 2024 for the conversion of salaries. Tables with salaries in national currency are included in Annex 2 (see Tables X2.3, X2.4, X2.5, X2.6 and X2.7). To calculate the index of change in teachers' salaries compared to 2015, the deflator for private consumption is used to convert salaries to 2015 prices. Reference statistics used in the calculation (PPPs and deflators for private consumption) are available in Table X2.8 in Annex 2. For more information, please see the methodology section of *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

In Table D3.2, the ratios of teacher salaries to earnings for similarly educated full-time, full-year workers aged 25-64 are calculated based on weighted averages of earnings of tertiary-educated workers (Columns 2 to 5 for teachers and Columns 10 to 13 for school heads). The weights, collected for every country individually, are based on the percentage of teachers or school heads at each ISCED level of tertiary attainment (see Tables X2.9 and X2.10 in Annex 2). The ratios have been calculated for countries for which these data are available. When data on earnings of workers referred to a different reference year than the 2024 reference year used for salaries of teachers or school heads, a deflator has been used to adjust earnings data to 2024. For all other ratios in Table D3.2 and those in Table D3.5 (available on line), information on all tertiary-educated workers was used instead of weighted averages. Data on the earnings of workers take account of earnings from work for all individuals during the reference period, including the salaries of teachers. In most countries, the population of teachers is large and may influence the average earnings of workers.

For more information, please see the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018[15]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Sources

Data on salaries for teachers and school heads are collected from the 2024 joint OECD/Eurydice data collection on salaries of teachers and school heads. Data refer to the school year 2023/24 (or the school year 2024) and are reported in accordance with formal policies for public institutions. Data on earnings of workers are based on the regular data collection by the OECD Labour Market and Social Outcomes of Learning Network.

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Tables and Notes

Chapter D3 Tables

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StatLink https://stat.link/49qs38

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D3.1. Teachers' statutory salaries, based on the most prevalent qualifications at different points in teachers' careers (2024)

Note: The definition of teachers' most prevalent qualifications is based on a broad concept, including the typical ISCED level of attainment and other criteria. The most prevalent qualification is defined for each of the four career stages included in this table. In many cases, the minimum qualification is the same as the most prevalent qualification. The minimum and the most prevalent qualifications are described in Table X3.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

1. Year of reference: 2023 (calendar year for Sweden).
2. Data on pre-primary education include salaries of kindergarten teachers (the majority).
3. Data include the average of fixed bonuses for overtime hours for lower and upper secondary teachers.
4. Data exclude the social security contributions and pension scheme contributions paid by the employees.

5. Actual salaries (including teachers of general subjects within vocational programmes in Sweden, and excluding bonuses and allowances in the United States).

Table D3.2. Teachers' and school heads' actual salaries relative to earnings of tertiary-educated workers (2024)

Note: Where the year of reference for the earnings of tertiary-educated workers and the salaries of teachers differ, the earnings of tertiary-educated workers have been adjusted to the reference year used for salaries of teachers using deflators for private final consumption expenditure.

1. Reference year differs from 2024 for salaries of teachers and school heads: 2023 for Czechia, Slovenia and Sweden (calendar year), 2022 for Chile.
2. Data on teachers in pre-primary education include the data for teachers in early childhood education and care.
3. Data on earnings for full-time, full-year workers with tertiary education refer to the whole country: Belgium for the Flemish and the French Communities of Belgium, and the United Kingdom for England and Scotland.

Table D3.3. Teachers' and school heads' average actual salaries (2024)

Note: Where the year of reference for the earnings of tertiary-educated workers and the salaries of teacher differ, the earnings of tertiary-educated workers have been adjusted using deflators for private final consumption expenditure.

1. Reference year differs from 2024: 2023 for Chile (school heads), Czechia, Poland (school heads), Slovenia and Sweden (calendar year); 2022 for Chile (teachers) and France (calendar year).
2. Data on teachers in pre-primary education include the data for teachers in early childhood education and care.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table D3.1. Teachers' statutory salaries, based on the most prevalent qualifications at different points in teachers' careers (2024)

Annual salaries of full-time teachers in public institutions, in equivalent USD converted using PPPs for private consumption, by level of education

	Pre-primary				Primary				Lower secondary, general programmes				Upper secondary, general programmes			
	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	59 303	85 317	85 317	93 619	57 541	82 054	82 054	93 020	57 477	81 842	81 842	92 959	57 477	81 842	81 842	92 959
Austria[1]	m	m	m	m	61 742	65 455	73 273	107 745	61 742	68 482	76 722	114 354	61 742	74 220	83 166	126 691
Canada	m	m	m	m	50 077	83 352	86 432	87 299	50 077	83 352	87 285	87 299	50 077	83 352	87 285	87 299
Chile	29 963	36 942	44 969	55 405	29 963	36 942	44 969	55 405	29 963	36 942	44 969	55 405	30 977	38 295	46 525	57 433
Colombia	31 723	57 853	57 853	57 853	31 723	57 853	57 853	57 853	31 723	57 853	57 853	57 853	31 723	57 853	57 853	57 853
Costa Rica	25 633	30 110	32 348	39 064	25 887	30 409	32 670	39 453	26 678	31 341	33 673	40 668	26 678	31 341	33 673	40 668
Czechia	25 759	26 595	27 265	30 275	27 348	29 021	30 359	35 795	27 348	29 104	30 359	36 046	27 348	29 104	30 359	35 962
Denmark	55 409	62 767	62 767	62 767	63 554	70 611	73 204	73 204	63 789	71 325	73 750	73 750	59 762	77 664	77 664	77 664
Estonia	m	a	a	a	32 836	a	a	a	32 836	a	a	a	32 836	a	a	a
Finland[2]	39 368	42 927	43 336	43 336	43 382	49 732	53 218	56 412	46 601	53 423	57 167	60 598	48 930	58 753	61 685	65 386
France[3]	43 597	47 886	49 462	70 228	43 597	47 886	49 462	70 228	47 220	51 510	53 086	74 214	47 220	51 510	53 086	74 214
Germany	m	m	m	m	78 904	90 801	95 657	102 439	87 120	98 709	103 952	113 544	90 567	101 784	107 491	122 251
Greece	23 363	28 205	30 627	45 153	23 363	28 205	30 627	45 153	23 363	28 205	30 627	45 153	23 363	28 205	30 627	45 153
Hungary	30 256	31 337	34 429	40 371	30 256	31 337	34 429	40 371	30 692	31 794	34 949	42 039	30 692	31 794	34 949	42 039
Iceland	51 878	52 373	54 663	55 837	51 878	52 373	54 663	55 837	51 878	52 373	54 663	55 837	48 176	58 338	61 204	61 204
Ireland	a	a	a	a	41 920	57 946	70 178	80 944	43 344	59 384	70 865	81 631	43 344	59 384	70 865	81 631
Israel	38 617	45 514	49 516	77 932	33 504	38 882	43 928	68 244	33 672	41 314	45 115	68 244	31 176	39 907	44 444	63 367
Italy	37 947	41 590	45 593	55 325	37 947	41 590	45 593	55 325	40 784	45 026	49 539	60 710	40 947	46 092	50 917	63 432
Japan	m	m	m	m	34 863	47 177	54 168	66 530	34 863	47 177	54 168	66 530	34 863	47 177	54 168	68 276
Korea	37 773	56 250	65 765	104 786	37 773	56 250	65 765	104 786	37 773	56 250	65 765	104 786	37 773	56 250	65 765	104 786
Latvia	25 486	m	m	40 778	25 157	m	m	40 243	25 157	m	m	40 243	25 157	m	m	40 243
Lithuania	39 107	40 369	44 970	51 172	39 107	40 369	44 970	51 172	39 107	40 369	44 970	51 172	39 107	40 369	44 970	51 172
Luxembourg	87 901	113 685	128 335	155 292	87 901	113 685	128 335	155 292	99 621	124 526	137 418	173 165	99 621	124 526	137 418	173 165
Mexico	26 184	32 551	40 401	50 446	26 184	32 551	40 401	50 446	32 715	40 870	51 067	63 779	61 856	71 169	75 953	75 953
Netherlands	58 988	84 653	96 250	121 022	58 988	84 653	96 250	121 022	58 805	89 684	102 711	121 026	58 805	89 684	102 711	121 026
New Zealand	m	m	m	m	39 932	63 758	63 758	63 758	39 932	63 758	63 758	63 758	41 726	67 121	67 121	67 121
Norway	50 690	58 126	58 126	59 431	61 833	63 619	63 619	68 370	61 833	63 619	63 619	68 370	61 833	69 446	69 446	77 382
Poland	28 712	34 038	41 355	43 101	28 712	34 038	41 355	43 101	28 712	34 038	41 355	43 101	28 712	34 038	41 355	43 101
Portugal	41 321	49 811	52 740	87 367	41 321	49 811	52 740	87 367	41 321	49 811	52 740	87 367	41 321	49 811	52 740	87 367
Slovak Republic	18 874	21 530	22 053	24 659	23 371	26 279	26 913	30 102	23 371	26 279	26 913	30 102	23 371	26 279	26 913	30 102
Slovenia	36 597	43 276	54 332	62 626	36 597	44 825	56 323	67 365	36 597	44 825	56 323	67 365	36 597	44 825	56 323	67 365
Spain	54 487	59 291	63 225	78 106	54 487	59 291	63 225	78 106	61 074	66 506	70 856	87 304	61 074	66 506	70 856	87 304
Sweden[1, 4, 5]	48 871	51 136	52 097	55 941	49 420	54 554	56 833	65 481	50 834	55 941	57 794	66 991	51 479	56 901	58 755	67 678
Switzerland	67 278	84 473	m	102 813	72 392	90 469	m	109 779	79 711	102 284	m	121 418	90 469	115 951	m	137 378
Türkiye	59 766	64 442	67 091	77 396	59 766	64 442	67 091	77 396	59 766	64 442	67 091	77 396	59 766	64 442	67 091	77 396
United States[5]	50 417	55 930	75 635	84 504	49 386	67 017	72 721	85 827	50 512	70 466	76 221	86 750	52 893	69 182	76 442	83 410
Other economies																
Flemish Comm. (Belgium)	51 743	64 809	72 924	91 861	51 743	64 809	72 924	91 861	51 743	64 809	72 924	91 861	64 478	82 097	93 577	116 539
French Comm. (Belgium)	49 599	61 965	69 736	85 280	49 599	61 965	69 736	85 280	49 599	61 965	69 736	85 280	61 649	78 520	89 514	107 838
England (UK)	41 468	a	63 995	63 995	41 468	a	63 995	63 995	41 468	a	63 995	63 995	41 468	a	63 995	63 995
Scotland (UK)	51 285	64 368	64 368	64 368	51 285	64 368	64 368	64 368	51 285	64 368	64 368	64 368	51 285	64 368	64 368	64 368
OECD average	42 655	52 224	55 725	67 076	44 465	55 972	59 673	71 449	45 923	58 072	61 563	73 883	47 339	60 772	63 925	76 535
Partner and/or accession countries																
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	24 526	m	m	m	24 526	m	m	m	24 526	m	m	m	24 526	m	m	m
Bulgaria	28 399	29 288	30 423	m	28 399	29 288	30 423	m	28 399	29 288	30 423	m	28 399	29 288	30 423	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	40 401	42 210	43 215	48 240	40 401	42 210	43 215	48 240	40 401	42 210	43 215	48 240
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	38 759	48 536	50 376	55 203	38 759	48 536	50 376	55 203	38 759	48 536	50 376	55 203	38 759	48 536	50 376	55 203
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	40 694	48 437	52 682	63 752	43 526	52 327	57 317	69 517	45 107	54 450	59 454	72 256	45 705	56 165	61 235	74 721
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D3.2. Teachers' and school heads' actual salaries relative to earnings of tertiary-educated workers (2024)

Ratio of salary, using annual average salaries (including bonuses and allowances) of full-time teachers and school heads in public institutions relative to the earnings of workers with similar educational attainment (weighted average) and to the earnings of full-time, full-year workers with tertiary education, by level of education

	Year of reference of latest available data on earnings of tertiary-educated workers	All teachers								All school heads							
		Actual salaries, relative to earnings for full-time, full-year similarly educated workers (weighted averages, 25-64 year-olds)				Actual salaries, relative to earnings for full-time, full-year workers with tertiary education (ISCED 5 to 8, 25-64 year-olds)				Actual salaries, relative to earnings for full-time, full-year similarly educated workers (weighted averages, 25-64 year-olds)				Actual salaries, relative to earnings for full-time, full-year workers with tertiary education (ISCED 5 to 8, 25-64 year-olds)			
		Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes	Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes	Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes	Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Australia	2023	m	m	m	m	1.03	0.97	0.97	0.97	m	m	m	m	1.44	1.59	1.83	1.83
Austria	2023	m	m	m	m	m	0.75	0.82	0.89	m	m	m	m	m	1.08	1.15	1.37
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile[1]	2023	0.63	0.64	0.65	0.68	0.73	0.75	0.76	0.79	0.97	0.96	0.98	1.09	1.15	1.13	1.16	1.28
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	2023	m	m	m	m	1.28	1.31	1.74	1.74	m	m	m	m	1.98	1.84	2.16	2.16
Czechia[1]	2023	0.76	0.71	0.70	0.73	0.57	0.72	0.72	0.76	1.05	1.08	1.08	1.18	0.83	1.13	1.13	1.24
Denmark	2023	m	m	m	0.84	0.68	0.82	0.83	0.97	m	m	m	1.34	0.90	1.20	1.20	1.55
Estonia	2023	0.72	0.87	0.84	0.82	0.67	0.87	0.87	0.87	0.85	0.99	0.99	0.98	0.91	1.08	1.08	1.08
Finland[2]	2022	0.71	0.69	0.76	0.84	0.64	0.81	0.88	0.99	0.89	0.95	1.11	1.15	0.84	1.12	1.31	1.36
France	2022	0.75	0.74	0.80	0.87	0.75	0.74	0.82	0.90	0.88	0.88	m	m	0.88	0.88	1.21	1.21
Germany	2023	m	m	m	m	m	0.88	0.97	1.01	m	m	m	m	m	m	m	m
Greece	2018	0.68	0.68	0.69	0.69	0.69	0.69	0.72	0.72	0.91	0.91	0.95	0.95	0.98	0.98	1.10	1.10
Hungary	2023	0.72	0.70	0.70	0.58	0.62	0.66	0.66	0.68	0.93	0.91	0.91	0.88	0.82	0.89	0.89	0.92
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	2022	0.81	0.79	0.81	0.81	0.87	0.86	0.91	0.88	a	1.29	1.26	1.33	a	1.53	1.50	1.53
Italy	2022	m	m	m	m	0.67	0.67	0.71	0.76	a	m	m	m	a	1.99	1.99	1.99
Japan	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	2023	0.68	0.74	0.74	0.73	0.64	0.77	0.77	0.78	0.94	0.94	0.94	0.94	1.01	1.01	1.01	1.01
Lithuania	2022	m	m	m	m	0.89	0.89	0.89	0.89	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	2023	0.86	0.86	0.89	0.89	0.80	0.80	0.87	0.87	1.13	1.13	1.22	1.22	1.12	1.12	1.25	1.25
New Zealand	2023	m	0.85	0.85	0.88	m	0.84	0.84	0.89	m	m	m	m	m	1.29	1.50	1.74
Norway	2023	0.73	0.77	0.77	0.78	0.66	0.73	0.73	0.80	0.93	1.06	1.06	1.17	0.84	0.98	0.98	1.19
Poland	2022	0.71	0.83	0.86	0.90	0.73	0.85	0.88	0.93	1.04	1.11	1.11	1.21	1.07	1.14	1.14	1.24
Portugal	2023	m	m	m	m	1.37	1.28	1.27	1.36	m	m	m	m	1.86	1.86	1.86	1.86
Slovak Republic	2023	m	m	m	m	0.58	0.74	0.74	0.79	m	m	m	m	m	m	m	m
Slovenia	2022	0.72	0.78	0.78	0.78	0.67	0.83	0.84	0.87	1.22	1.05	1.05	1.18	1.22	1.18	1.18	1.32
Spain	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Sweden[1]	2023	0.69	0.73	0.70	0.70	0.64	0.73	0.76	0.77	1.05	1.06	1.06	1.02	0.98	1.08	1.08	1.10
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
United States	2023	0.54	0.54	0.56	0.57	0.61	0.63	0.65	0.67	0.84	0.85	0.88	0.90	1.07	1.08	1.11	1.15
Other economies																	
Flemish Comm. (Belgium)[3]	2022	0.94	0.92	0.91	0.94	0.84	0.82	0.82	0.99	1.36	1.36	1.35	1.39	1.22	1.22	1.31	1.51
French Comm. (Belgium)[3]	2022	0.90	0.86	0.82	0.88	0.80	0.78	0.76	0.96	1.03	1.03	1.22	1.27	0.91	0.91	1.08	1.12
England (UK)[3]	2023	0.77	0.77	0.90	0.90	0.82	0.82	0.98	0.98	1.39	1.39	1.88	1.88	1.47	1.47	2.06	2.06
Scotland (UK)[3]	2023	m	m	m	m	0.94	0.94	0.94	0.94	m	m	m	m	m	1.45	1.88	1.88
OECD average		m	m	m	m	0.77	0.83	0.87	0.91	m	m	m	m	m	1.24	1.33	1.41
Partner and/or accession countries																	
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	2022	m	m	m	m	1.47	1.51	1.48	1.48	m	m	m	m	2.57	2.57	2.57	2.57
Romania	2023	m	m	m	m	1.11	1.14	1.15	1.18	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average		m	m	m	m	0.75	0.82	0.85	0.90	m	m	m	m	m	1.17	1.24	1.31
G20 average		m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D3.3. Teachers' and school heads' average actual salaries (2024)

Annual average salaries (including bonuses and allowances) of teachers and school heads in public institutions, in equivalent USD converted using PPPs for private consumption, by level of education

	25-64 year-old teachers				25-64 year-old school heads			
	Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes	Pre-primary	Primary	Lower secondary, general programmes	Upper secondary, general programmes
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	78 527	73 826	73 932	73 980	109 956	120 869	139 546	139 556
Austria	m	83 198	91 180	98 227	m	119 818	127 016	150 966
Canada	m	m	m	m	m	m	m	m
Chile[1]	35 898	36 442	37 030	38 403	55 984	55 349	56 548	62 626
Colombia	m	m	m	m	m	m	m	m
Costa Rica	40 280	41 477	54 931	54 931	62 550	57 989	68 237	68 237
Czechia[1]	33 466	42 201	42 165	44 667	48 945	66 599	66 599	72 960
Denmark	61 733	74 887	75 337	88 381	81 996	109 502	109 502	140 793
Estonia	32 203	42 019	42 019	42 019	43 845	51 748	51 748	51 748
Finland[2]	47 120	59 596	65 466	73 575	62 246	82 795	97 147	100 356
France[1]	53 297	52 347	58 435	64 012	62 334	62 334	85 940	85 940
Germany	m	91 950	100 831	105 523	m	m	m	m
Greece	30 994	30 994	32 297	32 297	43 686	43 686	49 286	49 286
Hungary	36 814	38 997	38 997	40 216	48 172	52 218	52 218	54 512
Iceland[2]	60 070	62 211	62 211	80 258	79 880	86 720	86 720	108 549
Ireland	a	68 284	71 798	71 798	a	97 574	124 978	124 978
Israel	53 551	53 316	55 871	54 336	a	94 547	92 430	94 283
Italy	49 507	49 507	52 642	56 021	a	147 424	147 424	147 424
Japan	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m
Latvia	26 822	32 330	32 330	32 741	42 764	42 764	42 764	42 764
Lithuania	54 118	54 118	54 118	54 118	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m
Netherlands	88 465	88 465	96 106	96 106	122 887	122 887	137 795	137 795
New Zealand	m	63 188	63 157	66 793	m	96 931	112 189	130 442
Norway	61 745	68 626	68 626	74 665	78 925	92 319	92 319	111 442
Poland[1]	47 295	55 407	57 091	60 372	69 586	74 366	74 366	80 786
Portugal	62 622	58 829	58 248	62 453	85 173	85 173	85 173	85 173
Slovak Republic	28 791	36 992	36 992	39 222	m	m	m	m
Slovenia[1, 2]	41 418	51 188	51 641	53 551	75 744	72 674	72 674	81 424
Spain	m	m	m	m	m	m	m	m
Sweden[1, 2]	48 395	55 418	57 616	58 689	73 919	81 906	81 906	83 013
Switzerland	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m
United States	66 325	68 153	70 578	72 927	116 456	117 560	121 041	124 654
Other economies								
Flemish Comm. (Belgium)	75 419	74 022	74 381	89 559	109 821	109 821	118 297	136 271
French Comm. (Belgium)	72 151	70 065	68 763	86 171	81 872	81 837	97 555	101 252
England (UK)	54 550	54 550	64 941	64 941	97 589	97 589	137 176	137 176
Scotland (UK)	62 584	62 584	62 584	62 584	m	96 217	124 846	124 846
OECD average	50 872	57 399	59 896	63 514	m	85 711	92 866	99 211
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m
Romania	50 785	52 567	53 029	53 994	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m
EU25 average	48 202	56 730	59 043	62 659	m	82 900	89 086	94 628
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter D4. Which factors influence teachers' salary cost?

Highlights

- Spending on teaching staff makes up the largest share of education expenditure. The level of teachers' salary costs per student depends on four factors: students' instruction hours, teachers' teaching hours and average class sizes (which together determine the number of teachers needed), and teachers' salaries.
- The two main factors influencing annual teachers' salary costs are teachers' salaries and class sizes. Between 2015 and 2023, teachers' salaries in primary education increased in three-quarters of OECD countries with available data, and by 7% in real terms on average. Over the same period, average class sizes decreased in about two-thirds of countries. Both trends contribute to a higher salary cost per student, as rising salaries increase overall expenditure and smaller class sizes require more teachers for the same number of students.
- Higher education levels tend to incur a higher teachers' salary cost per student. On average across OECD countries, salary costs rise from USD 3 993 per student in primary education to USD 4 444 in lower secondary education. This is mostly due to a combination of higher teachers' salaries and instruction time, and shorter teaching hours.

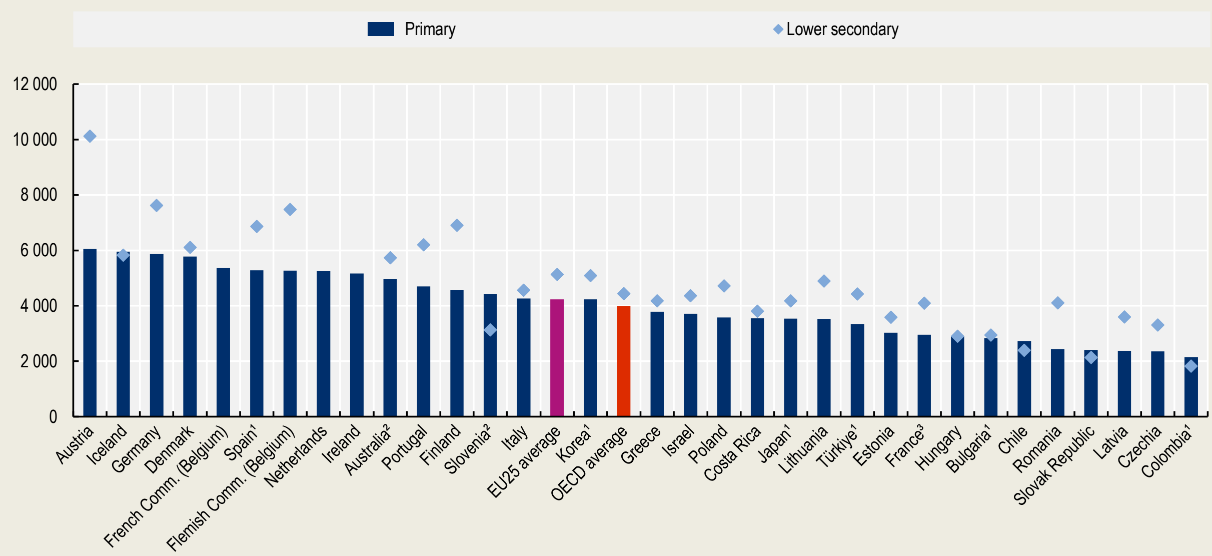
Context

Governments have become increasingly interested in the relationship between the amount of resources devoted to education and student learning outcomes. They seek to provide more and better education for their populations, while ensuring that public funding is used efficiently, particularly when public budgets are tight. Teachers' compensation usually accounts for the largest share of expenditure on education and thus of expenditure per student. The salary cost of teachers per student, as calculated in this chapter, is a function of students' instruction time, the number of hours that a single teacher teaches a full class, actual teachers' salaries and average class sizes (see *Methodology* section below and Box D4.1).

This chapter examines the choices countries make when investing their resources in primary and lower secondary education and explores how different policy choices related to these factors affect overall teachers' salary costs. The salary cost of teachers per student can be affected by other variables not directly assessed in this indicator, such as demographic changes. In countries where enrolment has been declining in recent years, class sizes would also be expected to shrink (assuming all other factors remain constant). However, there may not have been a parallel fall in the number of teachers. This chapter does not distinguish between a reduction in class size due to demographic changes or to a deliberate policy decision.

Figure D4.1. Annual salary cost of teachers per student in public institutions, by level of education (2023)

USD converted using PPPs for private consumption



1. Statutory salary (after 15 years of experience) instead of average actual salary (for 25-64 year-old teachers).
2. Lower secondary and upper secondary education are combined for the calculation of the student-teacher ratio.
3. Year of reference for actual salary differs from 2023.
For data, see Table D4.1. For a link to download the data, see Tables and Notes section.

Other findings

- In most countries, teachers' salary cost per student in primary education increased between 2015 and 2023, rising by an average of 20%, driven by demographic changes and/or political decisions. In contrast, the cost for lower secondary education grew more modestly in about three quarters of countries, with an average increase of only 8% over the same period.
- Similar levels of expenditure among countries can mask a variety of contrasting policy choices. For example, the Netherlands and Spain have nearly the same salary cost of teachers per primary student, even though teachers' salaries in the Netherlands are about 40% higher than in Spain. This is partly offset by the significantly longer time a single teacher teaches a full class – 236 additional hours per year – which reduces the number of teachers needed per student.
- For a few countries, their ranking changes considerably when teachers' salary costs per student are expressed as a percentage of gross domestic product (GDP) per capita rather than in absolute USD terms. At the primary level in 2023, Denmark had one of the highest absolute costs (USD 5 781) but ranked only 11th with respect to its relative cost (7.5% of GDP per capita). On average across OECD countries, the salary costs of teachers per student are equivalent to 7.4% of GDP per capita at primary level and 8.9% at lower secondary level.

Note

The analysis is limited to regular education. while special education and adult education are excluded from the scope of the Chapter. The use of actual salaries means that this chapter takes into account the actual level of qualifications and the seniority of the teaching workforce. As the actual salary does not include the employer's contribution to social security nor pensions, it does not represent the full cost incurred by the employer (i.e. the government). The calculation also includes a full-class adjustment factor for teaching time. The teaching time adjusted by this factor corresponds to the number of hours that a single teacher teaches a full class. If a class is split in two, or two teachers teach a class, this would count as half the teaching time. This adjustment ensures consistency with the existing formulas used to calculate the salary cost of teachers per student (SCS) while capturing the different teaching arrangements teachers face (see *Methodology* section).

Analysis

Contribution of each factor to the salary cost of teachers per student

Teachers' salary cost per student is shaped by four key factors: teachers' salaries, students' instruction time, teachers' statutory teaching time (adjusted using a full-class teaching time factor) and average class sizes. These factors influence salary costs in different ways. The effect of teacher salaries is direct: higher salaries increase the cost per student. The other three factors determine the number of teachers required, assuming a constant number of students. If instruction time increases or teachers' statutory teaching time decreases, more teachers are needed to maintain existing class sizes. Similarly, reducing class sizes increases the number of teachers required if other factors are constant, which in turn raises salary costs (see *Definitions* and *Methodology* sections).

By comparing each of these factors to the OECD average, it is possible to identify how they contribute to any deviation from the average salary cost. For instance, a country's higher-than-average salary cost may be driven by elevated teacher salaries, longer instruction time, reduced teaching hours, smaller class sizes or a combination of all four. This decomposition allows policy makers to understand not just how much is being spent, but why. Moreover, it highlights the trade-offs involved: modifying one factor may require compensatory adjustments to the others to maintain the same overall cost. This underscores the value of salary cost indicator in evaluating the efficiency and policy orientation of resource allocation within education systems.

Variation in teachers' salary cost per student by level of education

Different teachers' salary costs per student at different education levels can highlight significant differences in how countries allocate resources. On average across OECD countries, salary costs are higher in lower secondary education (USD 4 444) than in primary education (USD 3 993). This difference is largely driven by two structural factors: students receive more instructional hours (117 hours more per year), and teachers have shorter full-class teaching hours (44 hours fewer) in lower secondary education. In addition, teachers' salaries typically increase slightly with the level of education, further contributing to the higher teachers' salary costs per student. Combined, these factors increase the number of teachers needed per student and, consequently, raise overall salary costs between primary and lower secondary education. Against this, average class sizes increase slightly from 21 students in primary to 23 in lower secondary, which helps offset some of the additional costs. However, this modest increase in average class size is not enough to fully counterbalance the upward pressure from greater instructional demands, and reduced teaching time (Table D4.1, Table D4.2 and Table D4.3)

These averages mask considerable variation across countries, with some showing particularly large differences between education levels. In Austria, for example, the teachers' salary cost per student rises from USD 6 054 in primary education to over USD 10 127 in lower secondary education – a 67% increase, one of the highest among OECD countries. This reflects a combination of higher teachers' salaries, shorter statutory teaching hours and longer instruction time, not fully offset by the slightly larger class sizes at the secondary level. Finland, Latvia and Romania also report increases of over 50%, confirming the trend for substantial salary cost rises in a number of countries at the lower secondary level to account for subject specialisation, reduced teaching loads and the greater complexity of the secondary curriculum (Figure D4.1).

Not all countries follow this trend. A few report equal or even lower salary costs per student in lower secondary education compared to primary education. In Iceland, the cost per student is slightly higher at the primary level (USD 5 953) than at the lower secondary level (USD 5 830). In Slovenia, the gap is more substantial: USD 4 432 in primary and only USD 3 133 in lower secondary. Similar patterns can be seen in Chile, Colombia, Costa Rica, Hungary and the Slovak Republic (Figure D4.1)

Among the highest-spending countries are Austria, Flemish community of Belgium, Finland, Germany and Spain, all of which invest well above the OECD average at both levels. These countries generally combine higher teacher salaries with shorter teaching hours that a single teacher teaches a full class or smaller class sizes than the OECD average at both levels. At the other end of the spectrum, Colombia and Czechia, report salary costs per student of below USD 2 400 at the primary level and below USD 3 400 in lower secondary education (Figure D4.1).

Variation in teachers’ salary cost per student relative to countries’ wealth

To better understand the significance of teachers’ salary costs, it is useful to relate them to the size of a country’s economy. Expressing these costs as a share of GDP per capita offers a clearer picture of the economic effort devoted to education. This approach allows for meaningful international comparisons, showing not just how much countries spend in absolute terms, but how that spending aligns with their overall economic capacity. Two countries may invest similar amounts per student, but the relative burden on national resources can differ greatly depending on the size of their economies.

On average across the countries examined, the salary cost of teachers per student represents 7.4% of GDP per capita in primary education and 8.9% in lower secondary education. These averages conceal wide variation across countries, however, and with GDP per capita taken into account, the interpretation of countries’ spending levels can change significantly. Some devote a relatively large share of their national income to teachers’ salary costs despite having modest spending in absolute terms. For example, Costa Rica’s salary cost of teachers is about USD 3 547 per primary student – below the OECD average – but this represents 12.8% of GDP per capita, nearly double the average. In Colombia, the contrast is even sharper: the salary cost of teachers is just USD 2 153 per primary student, but this amounts to 9.8% of GDP per capita, signaling a substantial financial effort relative to economic capacity. Conversely, some high-income countries spend well above the average in absolute terms, but a relatively small share of GDP per capita. For instance, Denmark’s salary cost of teachers is USD 6 111 per lower secondary student – well above average – yet this represents only 7.9% of GDP per capita, below the OECD average. This suggests that while Denmark’s investment in education is high in absolute terms, the financial burden is relatively modest due to its strong economic capacity (Table D4.1).

These comparisons highlight how countries with more limited economic resources may be committing proportionally more of their income to sustaining their education workforce – underlining the importance of considering both absolute and relative measures when evaluating education financing.

Box D4.1. Methodological limitations and potential future developments

It is important to consider the limitations of the methodology used in this chapter when interpreting the results. First, the indicator is calculated using statutory values for teaching and instruction time. This means the results presented in this indicator are theoretical in nature and do not reflect the actual time teachers spend teaching. Indeed, even the concept of teaching and instruction time have become increasingly theoretical in nature, as learning settings become more flexible, making it difficult to accurately measure the amount of time spent on these activities.

Second, by using national figures, the indicator misses the wide discrepancies that may exist within countries. The trade-off between teachers' salaries and class size, for example, may have very different effects depending on the socio-economic status of students and schools. Moreover, the trade-offs highlighted in this analysis are only a few of the many decisions countries must take when allocating their resources. Countries must also examine potential trade-offs with other investment areas, such as teacher training and school infrastructure, as well as between different levels of education.

Finally, the breakdown of costs between primary and lower secondary has had to be estimated in a few countries because students at both levels are enrolled in the same schools, as in Norway, for example. For these countries, estimation methods may vary, so the breakdown of costs should be interpreted with caution.

Although some of these limitations are difficult to address due to current data availability, there are several possible avenues that would expand the analytical potential of this indicator were more data to become available. One relates to improving the precision when estimating the cost of teachers. To this end, it would also be relevant in the future to take into account the full cost of teachers' salaries for governments, including costs that do not go directly to teachers, such as employers' contributions and pensions. This would align the measurement of teachers' salary costs more closely with the education expenditure data presented in Part C.

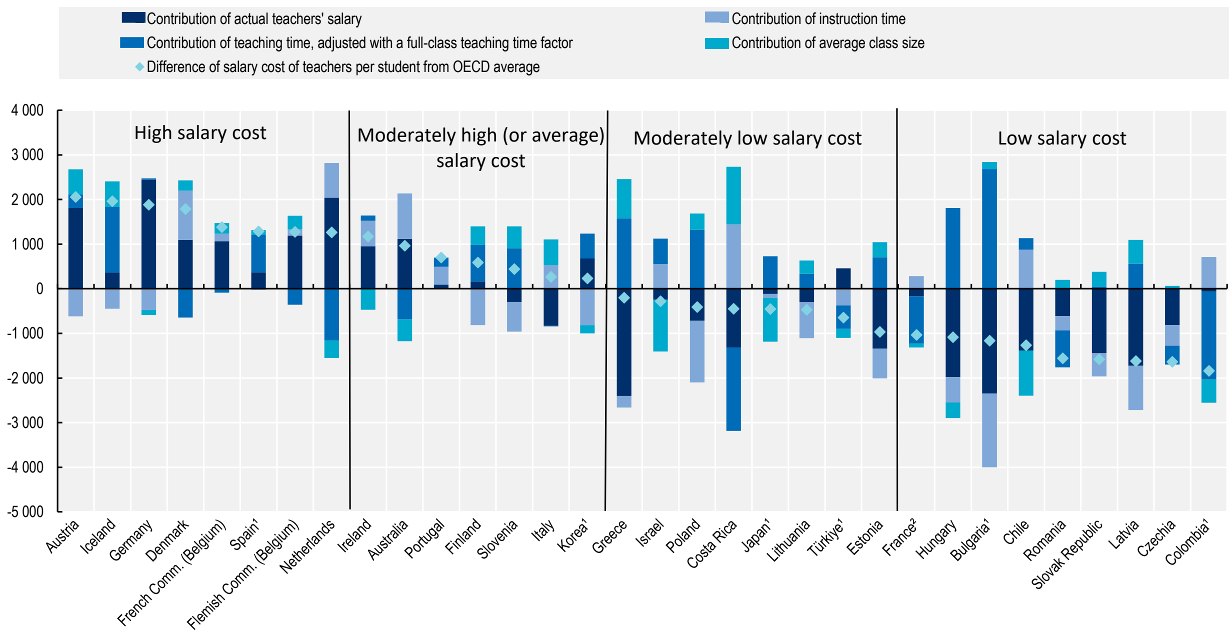
Other avenues for potential future development include exploring the link between teachers' salary costs and school funding formulae, and how the trade-offs associated with teachers' salary costs may differ across subnational levels of decision making, such as schools, school districts and municipalities.

Different policies in countries with similar spending

Figure D4.2 shows the wide variety of combinations of the four factors across countries and their different effects on the salary cost of teachers per student. The size of the contribution each factor makes to the difference between a country's salary cost and the OECD average depends on the difference between the factor itself and the respective OECD average. The sum of each factor's contribution equals the difference in salary cost between that country and the OECD average. For example, the salary cost per student in primary education in Australia is USD 4 958, which is USD 965 higher than the OECD average. This difference reflects the combined effects of several factors: above-average teachers' salaries increase the cost by USD 1 118; above-average instruction time adds USD 1 021; the above-average number of hours that a single teacher teaches a full class reduces the cost by USD 686; and above-average class sizes reduce it by USD 487 (Table D4.2).

Figure D4.2. Contribution of various factors to salary cost of teachers per student in public institutions, primary education (2023)

USD converted using PPPs for private consumption



1. Statutory salary (after 15 years of experience) instead of average actual salary (for 25-64 year-old teachers).
2. Year of reference for actual salary differs from 2023.
For data, see Table D4.2. For a link to download the data, see Tables and Notes section.

Higher levels of expenditure on education cannot automatically be equated with better performance by education systems. This can be seen when comparing 15-year-olds' average performance in mathematics and literacy in the OECD Programme for International Student Assessment (PISA) 2022 with cumulative spending per student between the ages of 6 and 15 in 2022 (see Figure C1.6 in Education at a Glance 2024 (OECD, 2024[1])). This is not surprising, as expenditure figures do not necessarily account for structural factors affecting learning outcomes (such as demographic changes). In addition, countries that spend similar amounts on education may have very different policies and practices. For example, the Netherlands and Spain have nearly the same teachers' salary cost per primary student, yet the underlying drivers differ considerably. In the Netherlands, teachers' salaries are about 40% higher than in Spain, but this is offset by significantly longer time a single teacher teaches a full class – 236 additional hours per year – which reduces the number of teachers needed per student. This illustrates how similar spending levels can result from different combinations of salary levels, teaching time and other structural factors.

To illustrate the wide range of policy choices that countries have made despite similar spending levels, the countries shown in Figure D4.2 are divided into four groups with similar teachers' salary cost per student (see Methodology section).

Group 1: High teachers' salary cost per student in primary education

This group includes the eight countries with the highest teachers' salary cost per primary student, with values ranging from USD 5 260 in the Netherlands to USD 6 054 in Austria (Figure D4.2 and Table D4.1). Although the cost is shaped by differences in the four key factors discussed above, these high-spending countries tend to display more alignment across these dimensions than countries in other groups. Notably, all countries in this group pay teachers above-average salaries, and most also report below-average statutory teaching hours (the number of hours that a single teacher teaches a full class) and smaller class sizes – both of which increase the number of teachers needed and thus raise costs. Exceptions include Belgium, Denmark and the Netherlands for the number of hours a single teacher teaches a full class, and Germany and the Netherlands for class size.

Despite these shared characteristics, the main drivers of high salary cost per student differ across countries. In Austria, Belgium, Germany and the Netherlands, the elevated cost is largely due to high teacher salaries, which directly raise per-student expenditure. In contrast, in Iceland and Spain, the high cost is mainly driven by shorter statutory teaching hours. This increases the number of teachers needed to meet instruction time requirements, even though salary levels in these two countries are closer to the OECD average than in the other countries in this group.

These differences illustrate how similar spending levels can result from distinct policy choices and structural arrangements. In some countries, the focus is on competitive teacher compensation to attract and retain talent, while others prioritise working conditions by limiting teaching time in front of a full classroom – both strategies leading to higher salary cost per student.

Group 2: Moderately high or slightly above-average teachers' salary cost per student in primary education

This group comprises seven countries with above-average teachers' salary costs per student, ranging from USD 4 229 in Korea to USD 5 165 in Ireland (Figure D4.2 and Table D4.1). In all of these countries except Finland and Portugal the salary cost reflects a trade-off between teachers' salaries and class size. Australia, Ireland and Korea report above-average teacher salaries, which push costs up, but these are partially offset by above-average class sizes. Conversely, in Slovenia and Italy, teachers' salaries are below the OECD average, but smaller class sizes drive up the salary cost per student.

A second trade-off, seen in all countries in the group except Ireland and Portugal, lies between students' instruction time and teachers' statutory teaching time. In Finland, Korea and Slovenia, below-average instruction time helps contain costs, but this is offset by the shorter number of hours that a single teacher teaches a full class, which increases the number of teachers needed. The reverse is observed in Australia and, to a lesser extent, Italy, where above-average instruction time is balanced by longer teaching hours, limiting the rise in per-student cost.

Group 3: Moderately low teachers' salary cost per student in primary education

This group includes eight countries with slightly below-average teachers' salary costs per student, ranging from USD 3 029 in Estonia to USD 3 790 in Greece, compared to the OECD average of USD 3 993 (Figure D4.2 and Table D4.1). All report below-average teachers' salaries, except Türkiye.

Although there are some similarities, the interaction of instruction time, teaching time and class size varies across the group. In six countries, the slightly below-average salary cost results from a combination of low teacher salaries and shorter teaching hours (adjusted by the full-class factor), which increases staffing needs but keeps overall cost contained due to lower wages. Beyond this, no clear pattern emerges; instead, the four factors often pull in different directions, offsetting one another. In Greece and Poland, lower teacher salaries and shorter instruction time tend to reduce salary cost, but this is partially offset by smaller class sizes and shorter teaching hours, which increase demand for teachers. In Israel, both low salaries and larger class sizes reduce salary cost, but this is counterbalanced by longer instruction time and shorter teaching time, which increase staffing requirements.

These cases show that similar spending levels can arise from different combinations of policy levers, highlighting the varied ways countries manage education cost.

Group 4: Low teachers' salary cost per student in primary education

This group includes nine countries with significantly below-average teachers' salary cost per student, ranging from USD 2 153 to USD 2 961 (Figure D4.2 and Table D4.1). The difference from the OECD average ranges from USD 1 032 in France to USD 1 840 in Colombia. In nearly all of these countries, the primary driver of lower cost is low teacher salaries, except in Colombia, where salary levels are closer to the OECD average. In several countries, including Bulgaria, Hungary and Latvia, low salaries alone explain more than USD 1 500 of the difference.

Instruction time also contributes. In six out of the nine countries, students receive less instruction time than the OECD average, which reduces total teaching demand. Only Chile, Colombia and France report average or above-average instruction time, limiting the cost-reducing effect of this factor in their cases.

There is no consistent trend across the group regarding teaching time and class size, although both influence salary cost. In Hungary and Bulgaria – and to a lesser extent in Latvia – significantly shorter teaching hours increase staffing needs, partially offsetting the impact of lower salaries. In contrast, Chile and Colombia benefit from substantially larger class sizes, which reduce the number of teachers needed and help contain salary cost per student despite upward pressures from above-average instruction time, which increases total teaching demand.

Overall, although low teacher salaries remain the dominant factor behind reduced costs in this group, differences in instruction time, teaching time and class sizes also shape national spending levels. These countries achieve similar salary cost outcomes through diverse configurations of policy and resource allocation, often reflecting broader fiscal constraints or strategic priorities in education.

Evolution of average class size and teachers' salaries

Between 2015 and 2023, the salary cost of teachers per student in primary and lower secondary education increased in constant price terms in all OECD countries except Austria (decrease for both levels), Finland, the Slovak Republic, Slovenia (decrease for lower secondary education) and Poland (decrease for primary education). On average, among countries with data for both years, salary cost increased by 20% at primary level and by 8% at lower secondary level, with significant variations in some countries. The largest increases at the primary level were recorded in Chile (53%), Slovak Republic (51%), and Slovenia (44%), both more than two times the OECD average. At the lower secondary level, Chile (45%) recorded an increase more than five times the OECD average (8%), while Latvia experienced a rise that was more than three times larger (27%) (Table D4.1).

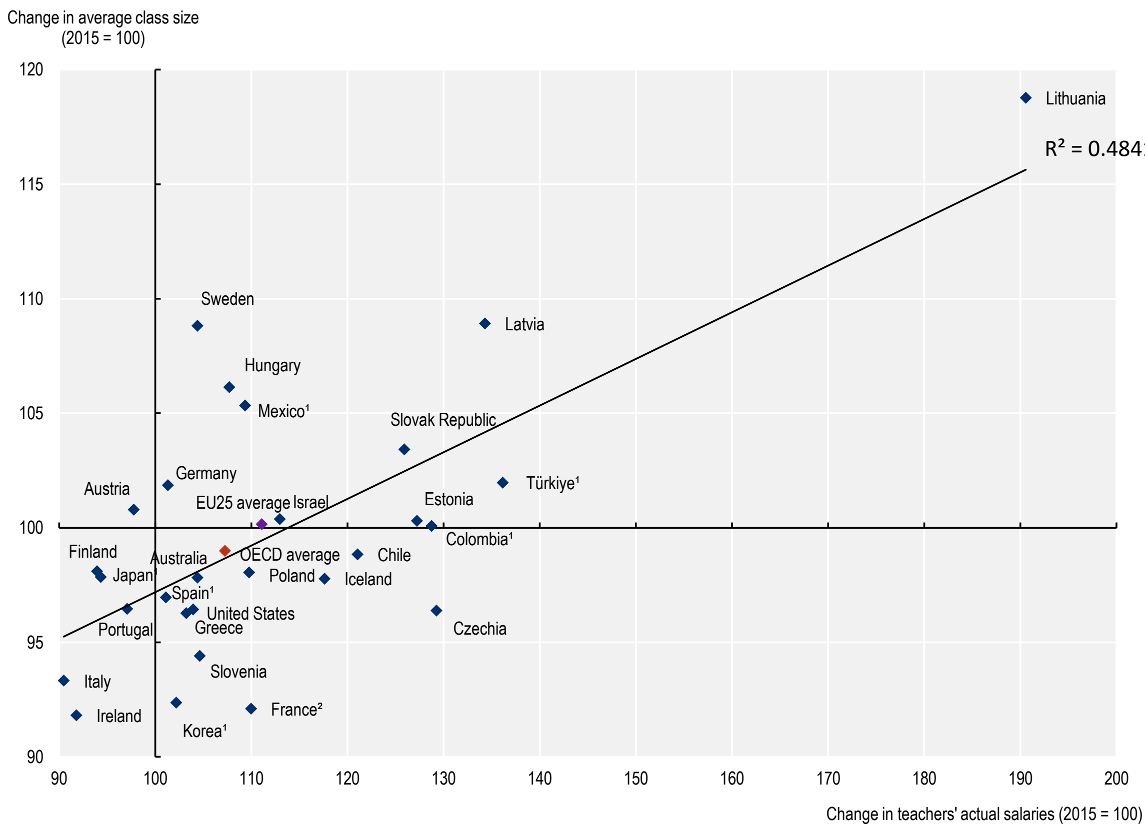
All other factors being equal, teachers' salary costs per student rise between primary and lower secondary education if teachers' actual salaries or instruction time increases, or if average class sizes or teaching time decreases. At both levels of education, teachers' salaries generally have the greatest impact on the degree to which countries' salary cost of teachers per student diverge from the OECD average (Tables D4.4 and D4.5, available on line).

Given constrained education budgets, policy reforms often involve a trade-off between increasing teachers' salaries and expanding the teaching workforce. Indeed, when controlling for the total salary cost of teachers, countries with higher teachers' salaries tend to have larger class sizes (OECD, 2023[2]). In contrast, instruction time and teaching time show relatively limited variation across and within most countries. (Tables D4.4 and D4.5, available on line).

Figure D4.3 plots the changes in teachers' actual salaries and average class sizes between 2015 and 2023. Over this period, teachers' salaries in primary education rose in three-quarters of OECD countries with available data, with an average increase of 7% in real terms. Meanwhile, average class sizes remained relatively stable at around 21 students per class. However, this masks considerable variation across countries, with two-thirds of countries showing a decline in average class sizes. Both trends contribute to higher salary costs per student, as rising salaries increase overall expenditure and smaller class sizes require more teachers for the same number of students, intensifying fiscal pressure on primary education systems.

Figure D4.3. Index of change in teachers' salaries and in average class size in primary education between 2015 and 2023

Public institutions only, 2023 constant prices



1. Statutory salary (after 15 years of experience) instead of average actual salary (for 25-64 year-old teachers).
2. Year of reference for actual salary: 2022.
For data, see Table D4.4 (available on line). For a link to download the data, see Tables and Notes section.

Increases in teachers' salaries have been more pronounced in some Eastern European countries (Czechia, Estonia, Latvia and Lithuania) and in Türkiye, with a more than 28% increase (Figure D4.3). Lithuania is a striking example, as it nearly doubled salaries for primary teachers (from USD 26 584 to USD 50 660) between 2015 and 2023. The substantial increase reflects a deliberate policy effort to attract younger teachers in response to an ageing workforce, as 57% of its teachers are aged 50 or older in primary education (see Table D8.1 in Chapter D8). Despite this, teachers' salaries in Lithuania remain below the OECD average (Table D4.4, available on line).

Among the two-thirds of OECD countries where average class sizes declined between 2015 and 2023, the most pronounced reductions (close to 10%) were observed in France, Ireland, Italy and Korea (Figure D4.3). In France and Ireland, these reductions reflect deliberate policy efforts to address educational inequality and support disadvantaged communities in primary education (DEPP, 2020[3]; DEPP, 2020[4]; Government of Ireland, 2020[5]). In contrast, the decreases in Italy and Korea appear to be largely driven by demographic trends. Both countries experienced notable declines in primary and lower secondary school enrolment over the last decade (see Figure B2.2 in Education at a Glance 2024), and their school-age populations (5-14 year-olds) are projected to fall further – by 18% in Italy and 37% in Korea by 2031 (OECD, 2024[6]). These examples illustrate how shifts in class size, whether driven by policy choices or structural demographic changes, require countries to strategically adapt their education systems, including how to allocate resources and maintain quality to sustain investments for increased workforce or amid shrinking student populations.

The countries in Figure D4.3 can be grouped into four categories, each corresponding to a quadrant in the chart. Countries in the top-right and bottom-left quadrants have effectively made a trade-off between increasing teachers' salaries or decreasing average class sizes over this period. Around one-third of countries fall into the top-right quadrant, where both average class sizes and teachers' salaries increased. This combination reduced the salary cost of teachers per student through larger classes, while simultaneously raising it through higher pay. Notably, the increases in average class sizes in Lithuania (by over 18%) and Latvia (by 8%) only partially offset the significant salary increases of 90% in Lithuania and 32% in Latvia. A few countries, including Ireland, Italy and Portugal made the opposite choice (bottom-left quadrant), with average class sizes falling, somewhat compensated for by falling teachers' salaries. It is important to note that although these changes have opposite effects on salary cost, they are not necessarily made in response to each other. Indeed, as noted above, for countries like Italy the reduction in the average class size was mainly driven by demographic changes (OECD, 2024[6]).

No particular trade-off between these two variables seems to have been made in the countries in the top-left and bottom-right quadrants. Only Austria features in the top-left quadrant, showing very small differences in average class sizes and reduced teachers' salaries, slightly pushing down teachers' salary costs. It is worth noting that Austria may not have pursued further class size reductions during this period, as its average class size is already below the OECD average. In contrast, almost half of the countries fall in the bottom-right quadrant, which reduced average class sizes (by up to 10% in France and Korea) and increased teachers' salaries (by up to 30% in Czechia), with both measures contributing to a higher salary cost per student.

Definitions

The data refer to public institutions only. The analysis is limited to regular education. while special education and adult education are excluded from the scope of the Chapter.

Instruction time in this Chapter refers to the amount and allocation of compulsory instruction time that has to be provided in almost every public school and must be attended by almost all public sector students. The compulsory curriculum may be flexible, as local authorities, schools, teachers and/or students may have varying degrees of freedom to choose the subjects and/or the allocation of compulsory instruction time (see Indicator D1 in *Education at a Glance* 2022).

Teachers' teaching time is the annual average number of hours that full-time teachers teach a group or class of students, including all extra hours, such as overtime (see Chapter D4 in *Education at a Glance* 2024). However, it does not necessarily reflect the time teachers spend in front of a full classroom. Therefore, the calculation includes a full-class adjustment factor for teaching time. The teaching time adjusted by this factor corresponds to the number of hours that a single teacher teaches a full class. For instance, if a class is split in two, or two teachers teach a class, this would count as half the teaching time. This adjustment ensures consistency with the existing formulas used to calculate the salary cost of teachers per student (SCS) while capturing the different teaching arrangements teachers face (see *Methodology* section).

Actual salaries for teachers/school heads aged 25-64 refer to the annual average earnings received by full-time teachers/school heads aged 25-64, before taxes, converted to USD using purchasing power parity (PPP) for private consumption (see Indicator D3). It is the gross salary from the employee's point of view, since it includes the part of social security contributions and pension-scheme contributions that are paid by the employees (even if deducted automatically from the employees' gross salary by the employer). However, the employers' premium for social security and pension is excluded (see Chapter D3 of *Education at a Glance* 2024).

Class size is calculated by dividing the number of students enrolled by the number of classes. In order to ensure comparability among countries, special needs programmes are excluded. Data include only regular programmes at primary and lower secondary levels of education, and exclude teaching in subgroups outside the regular classroom setting (see Chapter D2).

Theoretical class size refers to the theoretical size of classes given the statutory – or theoretical – values of instruction and teaching time and the student-teacher ratio. It does not reflect the actual average class size in countries.

Methodology

Compared with previous editions, the formula has been revised to incorporate average class size (instead of theoretical class size) and an estimate of the number of hours a teacher spends teaching a full-class (instead of the number of hours spent teaching either a full-class or a group of students).

The salary cost of teachers per student (SCS) is calculated as:

$$SCS = Teacher\ salary * Instruction\ time * \frac{1}{Full - class\ adjustment\ factor * Teaching\ time} * \frac{1}{Average\ Class\ Size}$$

Where the full-class adjustment factor and theoretical class size are calculated as:

1) $Full - class\ adjustment\ factor = \frac{Theoretical\ \ class\ size}{Average\ Class\ size}$

2) $Theoretical\ class\ size = \frac{Instruction\ time}{Teaching\ time} * \frac{Students}{Teachers}$

3) $Number\ of\ hours\ that\ a\ single\ teacher\ teaches\ a\ full\ class = \ Full - class\ adjustment\ factor * Teaching\ time$

Theoretical class size is calculated using statutory instruction time, teaching time and the student-teacher ratio. It is the class size that would result if teachers spent their entire statutory teaching hours individually teaching a full class. In practice, however, classes may be split for some hours, multiple teachers may share a class and teachers often devote part of their statutory teaching hours to other activities. These factors create a gap between the theoretical and the actual average class size. An adjustment factor is then applied to estimate the statutory teaching time, helping to bridge the gap between theoretical and actual class sizes and to estimate the equivalent number of hours a teacher spends teaching a full classroom. When applying the adjustment factor, the interpretation of teaching time changes. For example, an hour of teaching a class that has been split into two would count as 0.5 hours of full-class equivalent teaching time.

The contribution of each factor to the level of the salary cost of teachers per student is analysed by comparing the salary cost of teachers per student in each country to the OECD average then calculating the contribution of these different factors to the variation from the OECD average. This exercise is based on a mathematical relationship between the various factors and follows the method presented in the Canadian publication *Education Statistics Bulletin* (Éducation Québec, 2003[7]). Using this mathematical relationship and comparing a country's values for the four factors to the OECD averages makes it possible to measure both the direct and indirect contribution of each of these four factors to the variation in salary cost per student between that country and the OECD average.

Countries are grouped in four clusters with respect to their teachers' salary cost per student. The cluster analysis allows countries within a group to be more similar to each other than to countries in other groups. On the other hand, countries across groups are as dissimilar as possible.

Please see the *OECD Handbook for Internationally Comparative Education Statistics 2018* (OECD, 2018[8]) for more information.

Sources

Data on class size referring to the reference year 2023 (school year 2022/23) are based on the UNESCO, OECD and Eurostat (UOE) data collection on education statistics and on the Survey on Teachers and the Curriculum, which were both administered by the OECD in 2023.

Data on instruction time and teacher salaries are from the 2024 Joint Eurydice-OECD data collection and data on teaching time refer to 2024 OECD-INES-NESLI survey on working time of teachers.

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Tables and Notes

Chapter D4 Tables

Table D4.1	Salary cost of teachers per student, by level of education (2015 and 2023)
Table D4.2	Contribution of various factors to salary cost of teachers per student in primary education (2023)
Table D4.3	Contribution of various factors to salary cost of teachers per student in lower secondary education (2023)
WEB Table D4.4	*Factors used to compute the salary cost of teachers per student in primary education (2023)*
WEB Table D4.5	*Factors used to compute the salary cost of teachers per student in lower secondary education (2023)*

StatLink https://stat.link/dr6fab

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D4.1. Salary cost of teachers per student, by level of education (2015 and 2023)

1. Lower secondary and upper secondary education are combined for the calculation of the student-teacher ratio.

Statutory salary (after 15 years of experience) instead of average actual salary (for 25-64 year-old teachers).

2. Year of reference for actual salary: 2022.
3. The OECD average only includes OECD countries and other participants with data for all factors used to calculate salary cost.

Table D4.2. Contribution of various factors to salary cost of teachers per student in primary education (2023)

Note: See Tables D4.4 and D4.5, available on line, for notes on each factor.

1. Statutory salary (after 15 years of experience) instead of average actual salary (for 25-64 year-old teachers)
2. Year of reference for actual salary: 2022.

Table D4.3. Contribution of various factors to salary cost of teachers per student in lower secondary education (2023)

Note: See Tables D4.4 and D4.5, available on line, for notes on each factor.

1. Lower secondary and upper secondary education are combined for the calculation of the student-teacher ratio.
2. Statutory salary (after 15 years of experience) instead of average actual salary (for 25-64 year-old teachers)

3. Year of reference for actual salary: 2022.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table D4.1. Salary cost of teachers per student, by level of education (2015 and 2023)

Annual salary cost of teachers per student in public institutions, in equivalent USD, converted using PPPs for private consumption, and in percentage of GDP per capita

	2023				2015		Index of change over the period 2015-23	
	Salary cost of teachers per student (in USD)		Salary cost of teachers per student (in percentage of GDP per capita)		Salary cost of teachers per student (in USD, 2023 constant prices)		In salary cost of teachers per student (2015=100)	
	Primary	Lower secondary	Primary	Lower secondary	Primary	Lower secondary	Primary	Lower secondary
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia[1]	4 958	5 733	7.0	8.1	4 406	5 368	113	107
Austria	6 054	10 127	8.3	13.8	6 891	11 037	88	92
Canada	m	m	m	m	m	m	m	m
Chile	2 730	2 396	8.3	7.3	1 790	1 650	153	145
Colombia[2]	2 153	1 829	9.8	8.3	1 624	1 483	133	123
Costa Rica	3 547	3 808	12.8	13.7	m	m	m	m
Czechia	2 356	3 305	4.2	5.9	1 706	2 738	138	121
Denmark	5 781	6 111	7.5	7.9	m	m	m	m
Estonia	3 029	3 590	6.1	7.2	2 153	3 034	141	118
Finland	4 579	6 904	7.2	10.8	4 470	7 453	102	93
France[3]	2 961	4 099	4.8	6.7	2 453	3 954	121	104
Germany	5 876	7 621	8.3	10.8	m	m	m	m
Greece	3 790	4 183	9.2	10.1	m	m	m	m
Hungary	2 908	2 910	6.3	6.3	2 619	2 792	111	104
Iceland	5 953	5 830	7.3	7.2	4 661	4 666	128	125
Ireland	5 165	m	4.0	m	4 549	m	114	m
Israel	3 714	4 367	6.9	8.1	3 099	4 215	120	104
Italy	4 260	4 561	7.1	7.6	4 071	4 281	105	107
Japan[2]	3 538	4 179	7.1	8.4	3 334	4 096	106	102
Korea[2]	4 229	5 093	7.3	8.8	3 791	4 093	112	124
Latvia	2 374	3 599	5.7	8.7	2 096	2 829	113	127
Lithuania	3 523	4 894	6.6	9.2	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m
Netherlands	5 260	m	6.5	m	m	m	m	m
New Zealand	m	m	m	m	m	m	m	m
Norway	m	m	m	m	m	m	m	m
Poland	3 584	4 715	7.4	9.8	3 670	4 360	98	108
Portugal	4 696	6 199	9.6	12.7	4 307	5 915	109	105
Slovak Republic	2 411	2 141	5.4	4.8	1 601	2 367	151	90
Slovenia[1]	4 432	3 133	8.0	5.6	3 076	5 871	144	53
Spain[2]	5 280	6 871	9.8	12.7	4 692	6 110	113	112
Sweden	m	m	m	m	m	m	m	m
Switzerland	m	m	m	m	m	m	m	m
Türkiye[2]	3 346	4 429	7.5	9.9	2 383	m	140	m
United States	m	m	m	m	m	m	m	m
Other economies								
Flemish Comm. (Belgium)	5 269	7 477	7.3	10.4	m	m	m	m
French Comm. (Belgium)	5 376	m	7.5	m	5 105	m	105	m
England (UK)	m	m	m	m	m	m	m	m
Scotland (UK)	m	m	m	m	m	m	m	m
OECD average[4]	3 993	4 444	7.4	8.9	3 359	4 000	120	108
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria[2]	2 831	2 942	7.3	7.6	m	m	m	m
China	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m
Romania	2 434	4 111	5.1	8.6	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m
EU25 average	4 236	5 136	7.0	9.0	3 564	4 826	119	106
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D4.2. Contribution of various factors to salary cost of teachers per student in primary education (2023)

Public institutions only, in equivalent USD, converted using PPPs for private consumption

	Salary cost of teachers per student (2023)	Difference (in USD) from the 2023 OECD average of: USD 3 993	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in USD) of actual teachers' salary below/above the 2023 OECD average of: USD 54 905	Effect (in USD) of instruction time (for students) below/above the 2023 OECD average of: 797 hours	Effect (in USD) of teaching time (for teachers), adjusted with a full-class teaching time factor, below/above the 2023 OECD average of: 531 hours	Effect (in USD) of average class size below/above the 2023 OECD average of: 21 students per class
OECD countries	(1)	(2) = (3)+(4)+(5)+(6)	(3)	(4)	(5)	(6)
Australia	4 958	**965**	1 118	**1 021**	- 686	**- 487**
Austria	6 054	**2 060**	1 811	**- 618**	302	**565**
Canada	m	m	m	m	m	m
Chile	2 730	**-1 263**	-1 381	**875**	259	**-1 015**
Colombia[1]	2 153	**-1 840**	- 66	**713**	-1 967	**- 521**
Costa Rica	3 547	**- 446**	-1 316	**1 443**	-1 867	**1 294**
Czechia	2 356	**-1 637**	- 815	**- 463**	- 422	**62**
Denmark	5 781	**1 788**	1 096	**1 101**	- 644	**235**
Estonia	3 029	**- 964**	-1 343	**- 664**	704	**339**
Finland	4 579	**586**	162	**- 812**	818	**418**
France[2]	2 961	**-1 032**	- 166	**282**	-1 060	**- 88**
Germany	5 876	**1 883**	2 439	**- 479**	33	**- 111**
Greece	3 790	**- 203**	-2 401	**- 262**	1 580	**880**
Hungary	2 908	**-1 085**	-1 979	**- 571**	1 811	**- 346**
Iceland	5 953	**1 960**	363	**- 445**	1 472	**571**
Ireland	5 165	**1 172**	953	**569**	121	**- 471**
Israel	3 714	**- 279**	- 245	**554**	572	**-1 159**
Italy	4 260	**266**	- 832	**524**	- 10	**585**
Japan[1]	3 538	**- 455**	- 118	**- 90**	730	**- 977**
Korea[1]	4 229	**236**	679	**- 814**	557	**- 186**
Latvia	2 374	**-1 619**	-1 726	**- 990**	558	**539**
Lithuania	3 523	**- 470**	- 303	**- 803**	332	**304**
Luxembourg	m	m	m	m	m	m
Mexico	m	m	m	m	m	m
Netherlands	5 260	**1 266**	2 043	**775**	-1 160	**- 391**
New Zealand	m	m	m	m	m	m
Norway	m	m	m	m	m	m
Poland	3 584	**- 410**	- 717	**-1 380**	1 318	**369**
Portugal	4 696	**703**	93	**401**	197	**12**
Slovak Republic	2 411	**-1 582**	-1 443	**- 519**	45	**336**
Slovenia	4 432	**439**	- 297	**- 662**	907	**491**
Spain[1]	5 280	**1 287**	369	**- 26**	842	**103**
Sweden	m	m	m	m	m	m
Switzerland	m	m	m	m	m	m
Türkiye[1]	3 346	**- 647**	456	**- 372**	- 525	**- 206**
United States	m	m	m	m	m	m
Other economies						
Flemish Comm. (Belgium)	5 269	**1 276**	1 189	**140**	- 358	**305**
French Comm. (Belgium)	5 376	**1 382**	1 067	**168**	- 88	**236**
England (UK)	m	m	m	m	m	m
Scotland (UK)	m	m	m	m	m	m
OECD average	3 993	**0**	0	**0**	0	**0**
Partner and/or accession countries						
Argentina	m	m	m	m	m	m
Brazil	m	m	m	m	m	m
Bulgaria[1]	2 831	**-1 162**	-2 346	**-1 656**	2 682	**159**
China	m	m	m	m	m	m
Croatia	m	m	m	m	m	m
India	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m
Peru	m	m	m	m	m	m
Romania	2 434	**-1 559**	- 614	**- 321**	- 826	**202**
Saudi Arabia	m	m	m	m	m	m
South Africa	m	m	m	m	m	m
EU25 average	4 097	**104**	- 163	**- 272**	334	**206**
G20 average	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D4.3. Contribution of various factors to salary cost of teachers per student in lower secondary education (2023)

Public institutions only, in equivalent USD, converted using PPPs for private consumption

	Salary cost of teachers per student (2023)	Difference (in USD) from the 2023 OECD average of: USD 4 444	Contribution of the underlying factors to the difference from the OECD average			
			Effect (in USD) of actual teachers' salary below/above the 2023 OECD average of: USD 54 968	Effect (in USD) of instruction time (for students) below/above the 2023 OECD average of: 914 hours	Effect (in USD) of teaching time (for teachers), adjusted with a full-class teaching time factor, below/above the 2023 OECD average of: 488 hours	Effect (in USD) of theoretical class size below/above the 2023 OECD average of: 23 students per class
OECD countries	(1)	(2) = (3)+(4)+(5)+(6)	(3)	(4)	(5)	(6)
Australia[1]	5 733	**1 288**	1 281	**458**	- 789	**339**
Austria	10 127	**5 683**	3 171	**122**	1 814	**577**
Canada	m	m	m	m	m	m
Chile	2 396	**-2 048**	-1 311	**525**	- 489	**- 773**
Colombia[2]	1 829	**-2 615**	- 71	**879**	-2 622	**- 802**
Costa Rica	3 808	**- 636**	- 385	**848**	45	**-1 143**
Czechia	3 305	**-1 139**	-1 019	**- 114**	- 116	**110**
Denmark	6 111	**1 667**	1 227	**1 446**	-1 812	**806**
Estonia	3 590	**- 854**	-1 545	**- 428**	403	**716**
Finland	6 904	**2 460**	756	**- 702**	1 390	**1 016**
France[3]	4 099	**- 345**	262	**246**	- 454	**- 398**
Germany	7 621	**3 177**	3 495	**- 121**	- 89	**- 108**
Greece	4 183	**- 261**	-2 404	**- 541**	2 300	**382**
Hungary	2 910	**-1 534**	-2 050	**- 482**	524	**474**
Iceland	5 830	**1 386**	370	**- 442**	798	**661**
Ireland	m	m	m	m	m	m
Israel	4 367	**- 77**	- 44	**294**	990	**-1 318**
Italy	4 561	**117**	- 629	**361**	- 266	**651**
Japan[2]	4 179	**- 265**	- 141	**- 119**	1 367	**-1 373**
Korea[2]	5 093	**649**	779	**- 396**	785	**- 519**
Latvia	3 599	**- 845**	-1 922	**- 662**	596	**1 143**
Lithuania	4 894	**450**	- 383	**- 384**	930	**287**
Luxembourg	m	m	m	m	m	m
Mexico	m	m	m	m	m	m
Netherlands	m	m	m	m	m	m
New Zealand	m	m	m	m	m	m
Norway	m	m	m	m	m	m
Poland	4 715	**271**	- 811	**- 895**	1 022	**956**
Portugal	6 199	**1 755**	10	**- 592**	1 933	**404**
Slovak Republic	2 141	**-2 303**	-1 450	**- 336**	- 886	**369**
Slovenia[1]	3 133	**-1 311**	- 235	**- 665**	- 804	**393**
Spain[2]	6 871	**2 427**	1 066	**811**	829	**- 279**
Sweden	m	m	m	m	m	m
Switzerland	m	m	m	m	m	m
Türkiye[2]	4 429	**- 15**	587	**- 363**	642	**- 881**
United States	m	m	m	m	m	m
Other economies						
Flemish Comm. (Belgium)	7 477	**3 032**	1 482	**223**	- 148	**1 475**
French Comm. (Belgium)	m	m	m	m	m	m
England (UK)	m	m	m	m	m	m
Scotland (UK)	m	m	m	m	m	m
OECD average	4 444	**0**	0	**0**	0	**0**
Partner and/or accession countries						
Argentina	m	m	m	m	m	m
Brazil	m	m	m	m	m	m
Bulgaria[2]	2 942	**-1 502**	-2 419	**- 826**	1 465	**278**
China	m	m	m	m	m	m
Croatia	m	m	m	m	m	m
India	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m
Peru	m	m	m	m	m	m
Romania	4 111	**- 333**	- 803	**389**	- 505	**586**
Saudi Arabia	m	m	m	m	m	m
South Africa	m	m	m	m	m	m
EU25 average	4 975	**531**	- 210	**- 157**	406	**492**
G20 average	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter D5. How do academic staff profiles and institutional characteristics shape tertiary education?

Highlights

- The ratio of students to academic staff ratio is slightly lower in public institutions than in private institutions, with about 15 students per academic staff member in public institutions and 18 in private institutions on average across OECD countries.
- Across the OECD, the share of academic staff aged 50 or over has remained at 40% between 2013 and 2023. In Greece, Italy and Korea, more than half of the academic workforce are at least 50 years old, indicating a need to replace a large number of retiring academic staff in the near future.
- The representation of women among academic staff has grown since 2013 in most OECD countries, reaching 46% on average across OECD countries in 2023.

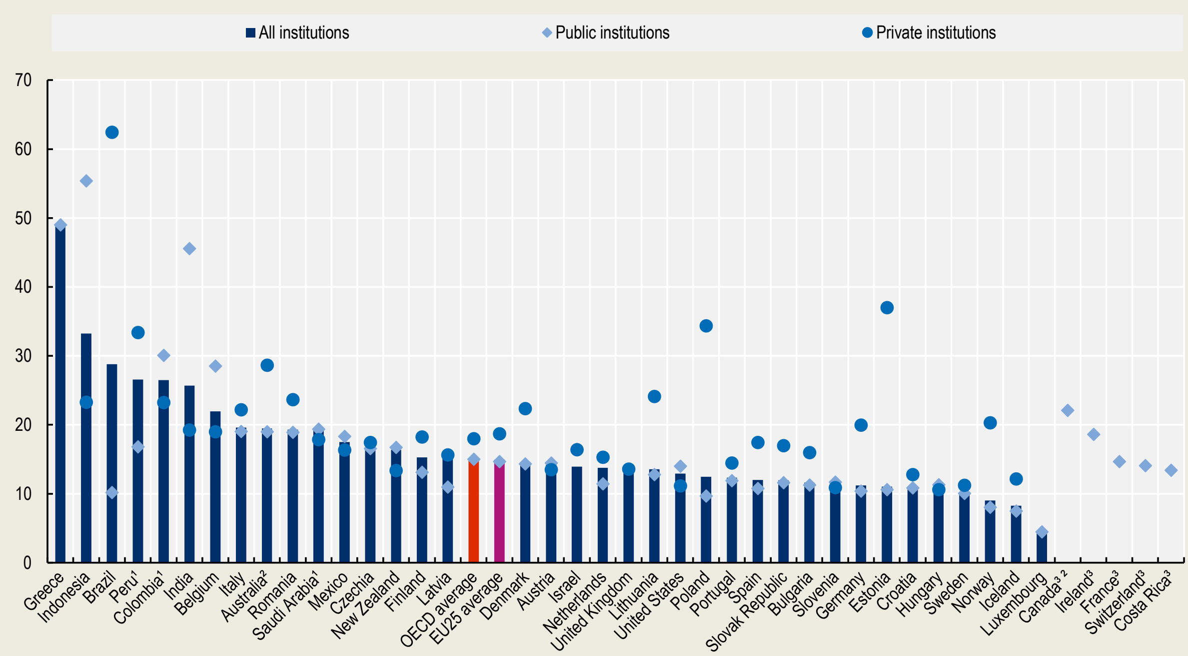
Context

The tertiary education landscape is shaped by a complex interplay of factors, including demographic trends, labour-market shifts and institutional diversity. One key metric for assessing academic resources is the ratio of students to academic staff. This ratio is often associated with the level of support and individual attention available to students, but must be interpreted with care at the tertiary level. For instance, short-cycle tertiary programmes – typically vocational in nature – often combine large-scale theoretical instruction with small-group practical modules, resulting in varied levels of staff engagement. There are also different instructional formats at higher levels of education: general courses may be delivered in large lecture halls, while specialised or research-focused programmes often involve smaller groups and more intensive academic interaction. These structural and pedagogical variations highlight the need to consider student-staff ratios in relation to institutional type, level of study and programme orientation. Furthermore, institutional characteristics such as mission, size and geographical distribution can influence how academic resources are allocated, underscoring the importance of disaggregated analysis.

The demand for academic staff across countries is shaped by multiple factors, including workload models, staffing structures and enrolment patterns across education levels. In several OECD countries, a significant share of academic staff is approaching retirement age, raising concerns about future capacity. This is compounded by growing expectations for higher education institutions to contribute to workforce upskilling and adult education, alongside demographic shifts that are likely to increase overall student demand in some countries. Gender and age dynamics further complicate the staffing landscape. Despite policy efforts to promote gender equity, men continue to dominate senior academic ranks in many systems, and women disproportionately face short-term contracts and limited advancement opportunities. These structural inequalities point to the need for more systemic reforms in academic career pathways.

Institutional diversity is another defining feature of tertiary education systems. In response to pressures to promote social equity, meet evolving skills demands and limit costs, governments have expanded traditional universities or introduced new institutional categories in tertiary education (OECD, 2020[1]). This contributes to greater diversity, as newly established institutions tend to develop distinct missions, reputations and performance profiles. In some cases, governments have deliberately created new types of institutions – such as universities of applied sciences – with the explicit goal of fostering “horizontal” differentiation. This approach seeks to promote institutional variety not through hierarchy, but through complementarity, recognising diverse institutions as equally valuable components of the higher education landscape. Understanding institutional diversity across multiple dimensions is thus critical to informing effective policy decisions and long-term strategic planning.

Figure D5.1. Ratio of students to academic staff, by type of institution (2023)



1. Year of reference differs from 2023.
2. Excludes short-cycle tertiary.
3. Public institutions only.
For data, see Table D5.1. For a link to download the data, see Tables and Notes section.

Other findings

- Women are better represented among younger staff, accounting for about 52% of academic staff under 30 on average across OECD countries, a much larger share than among academic staff of all ages (46%).
- Young academic staff (under the age of 30) only account for a small proportion of the total: averaging 6% in short-cycle tertiary education and 9% at bachelor’s, master’s and doctoral levels combined across OECD countries. These young staff are usually starting out in academia, either during their doctoral programme or directly after.
- In most countries, research-intensive institutions producing 3 or more PhD graduates per 100 non-PhD graduates generally have lower student-to-academic staff ratios than those producing fewer PhD graduates. However, some countries show the opposite trend or minimal differences, reflecting variations in academic staffing, doctoral student roles and national higher education structures.

Analysis

Ratio of students to academic staff

The student-academic staff ratio is a key indicator of how educational resources are allocated at the tertiary level. It has implications for the quality of instruction, the efficiency of funding and the working conditions of academic staff. While this indicator may not be as central as the student-teacher ratio at lower levels of education in signalling the human resources available to students, it still provides valuable insights into tertiary education systems. When calculated at the national level, the student-academic staff ratio offers a broad perspective on resource allocation across countries. At the institutional level, it can reveal important differences in how resources are distributed, depending on factors such as programme type or institutional mission (see Box D5.1 for a closer look at institutional diversity). A better understanding of this ratio can help inform policies that promote student success, support academic staff and strengthen the overall sustainability of tertiary education systems.

Ratio of students to academic staff by type of institution

At the tertiary level, private institutions have slightly more students per academic staff than public institutions on average across OECD countries, with 15 students per academic staff member in public institutions and 18 in private institutions (Table D5.1). The OECD average should be interpreted with caution, however, given the variety of institutional characteristics both within and across countries. Disaggregating student-academic staff ratios by type of institution is essential, as public and private institutions often differ in their funding models, governance structures and educational missions – factors that can strongly influence staffing levels and resource allocation.

Among OECD and partner countries, Brazil, Estonia, Norway, Peru and Poland report student-academic staff ratios in private institutions that are at least twice as high as those in public institutions (Figure D5.1). However, no more than 20% of tertiary students are enrolled in private institutions in Estonia, Germany and Norway (OECD, 2025[2]). The relatively small share of enrolment accounted for by in private institutions may make this indicator more sensitive to fluctuations, which could partially explain the large differences observed in ratios between public and private institutions.

In Poland, the ratio of students to staff in private institutions is 34:1, more than three times the ratio in public institutions of 10:1. This large difference could be related to the way the Polish private tertiary education sector has responded to domestic demographic decline by actively recruiting international students, who are in turn attracted by cost-effectiveness and English-taught programmes, while academic staff numbers have not risen (OPI PIB, 2022[3]; Walker, 2025[4]). The largest difference in student-academic staff ratios between public and private institutions is in Brazil where it is 62:1 in private institutions compared to 10:1 in public institutions. In Brazil, about 77% of tertiary students are enrolled in private institutions, which are considered less selective than public institutions and rely largely on distance learning, which may allow larger student-academic staff ratios (OECD, 2018[5]). Brazilian students face either a performance barrier to accessing free but highly selective public institutions, or a financial barrier to accessing private institutions, which could limit their opportunities and raises equity concerns (McCowan, 2007[6]). In some other partner countries, the difference between public and private institutions is significant in the other direction: in India and Indonesia, public institutions have over twice as many students for each academic staff member as private institutions (Table D5.1).

Ratio of students to academic staff by education level

Differences in student-academic staff ratios between short-cycle tertiary programmes and bachelor's, master's and doctoral programmes reflect the diverse structures and objectives of these educational levels. On average across OECD countries, the ratios are quite similar: 15:1 at bachelor's, master's and doctoral or equivalent level compared to 14:1 in short-cycle tertiary education. However, in Luxembourg and Saudi Arabia the ratios at the short-cycle tertiary level are more than double those at the bachelor's, master's and doctoral levels. These differences may stem from structural aspects of programme delivery, variations in institutional capacity or differences in how academic staff are allocated across levels of education (Table D5.1).

Differences between public and private institutions in student-academic staff ratios can also vary depending on the level of education. At the short-cycle tertiary level, public institutions have higher student-academic staff ratios than private ones in five OECD and partner countries. At the combined bachelor’s, master’s and doctoral levels, this patten is less common, with eight countries reporting higher ratios in public institutions, while 20 countries report lower ratios, and one country shows no difference. Moreover, in some countries such as Austria, Colombia and Israel, there are contrasting patterns across education levels. For example, in Colombia, public institutions at the short-cycle tertiary level have much higher student-academic staff ratios (41 more students per staff member than private institutions), whereas at the higher education levels, the ratio is lower in public institutions (9 fewer students per staff member). This contrast may be linked to the high demand for vocational training in Colombia, much of which is provided by *Servicio Nacional de Aprendizaje* (SENA), a public institution overseen by the Ministry of Labor. As one of the largest providers of short-cycle tertiary education in the country, SENA focuses on expanding access, especially for students from lower-income backgrounds (Dinarte-Diaz et al., 2020[7]). This emphasis on inclusivity may contribute to higher student-academic staff ratios in public institutions at this level. Conversely, the lower ratio at the bachelor’s, master’s and doctoral levels in public institutions (23:1) may reflect greater investment in academic staffing and different institutional priorities (Table D5.1).

Trends in the ratio of students to academic staff

Since 2013, the average student-academic staff ratio has remained relatively stable at around 15:1 at the tertiary level across OECD countries. However, this conceals different trends among individual OECD and partner countries. In 21 countries, the ratio of students to academic staff has fallen, reflecting increased investment in and prioritisation of quality in tertiary education (see Chapter C1). Conversely, the countries that have seen a general increase in the ratio over this time include Brazil, Colombia, India, Indonesia and Mexico, where rapid expansion in higher education systems has often outpaced the growth of academic staff, driven by rising demand for access to tertiary education (Table D5.1).

Box D5.1. Institutional diversity in tertiary education

Diversity in higher education refers to the variety found within higher education institutions and systems. It concerns differences in the programmes or services provided by institutions and differences in the types of institutions themselves (Widiputera et al., 2017[8]). Higher education systems are characterised by significant institutional diversity, reflecting a wide range of missions, organisational structures, activities and educational goals (Dill and Teixeira, 2000[9]; Meek, Goedegebuure and Huisman, 2000[10]; Huisman et al., 2015[11]).

How do tertiary institutions differ by research orientation?

Debates around the "research-teaching nexus" often highlight tensions between these two foundational functions, particularly when policy measures unintentionally exacerbate conflicts between them. This can affect faculty workload distribution as well as the overall student experience (Geschwind and Broström, 2014[12]). In this context, analysing the student-academic staff ratio becomes crucial for ensuring transparency, promoting equity in access and maintaining a balanced and responsive higher education system that meets diverse societal needs.

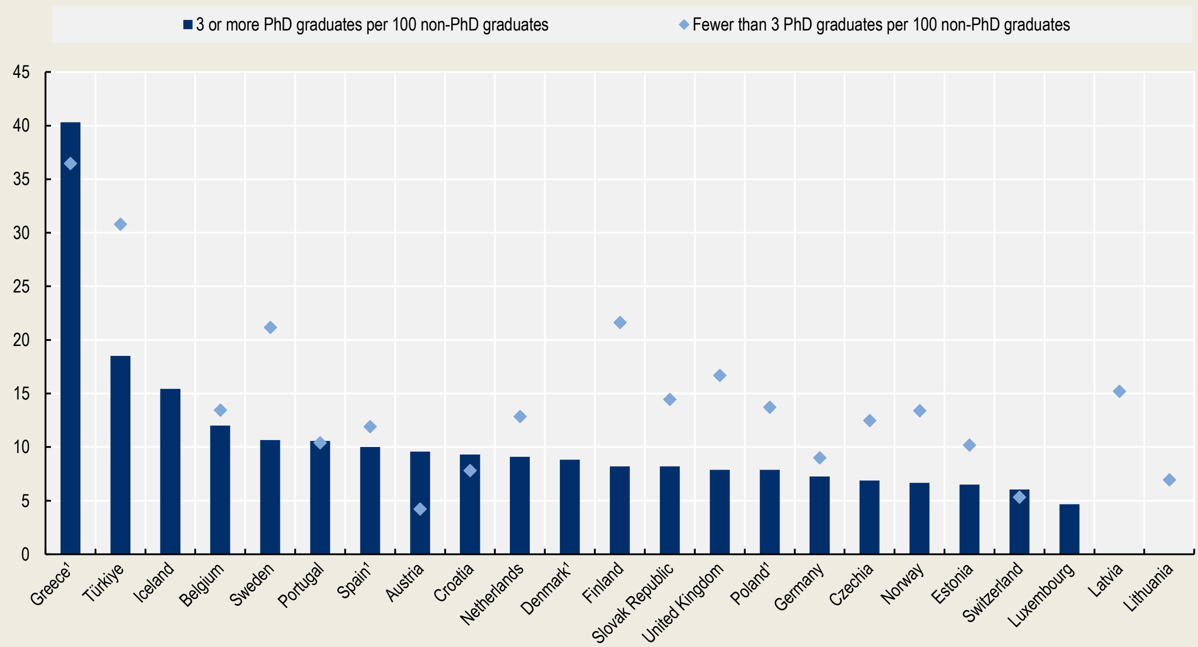
Tertiary institutions with different research orientations face unique challenges. In research-intensive institutions, increased specialisation in academic roles allows research-active faculty members to focus more on research, often resulting in lighter teaching loads. Consequently, fixed-term or teaching-only staff bear a disproportionate share of instructional responsibilities, leading to higher actual ratios of students to academic staff. While this model boosts research productivity, it may hinder career advancement for teaching-focused staff and raises concerns about equitable workload distribution and institutional recognition of teaching contributions (OECD, 2020[1]; Kwiek, 2019[13]). In less research-oriented institutions, issues such as funding sustainability, limited research infrastructure and constraints on faculty professional development also arise. These institutions often focus more heavily on undergraduate education and community engagement yet may struggle to secure resources due to the emphasis placed on research outputs in funding models and policy frameworks. As tertiary education systems continue to expand across OECD countries, striking a balance between research and teaching priorities is essential to ensure high-quality education, faculty well-being and the long-term sustainability of diverse institutional models.

PhD intensity is frequently used to indicate the extent to which an institution is research-oriented relative to its undergraduate and master's level teaching. It is calculated as the ratio of doctoral graduates (ISCED level 8) to the total number of graduates at short-cycle, bachelor's and master's level combined (ISCED levels 5 to 7) (European Commission, 2023[14]). A high PhD intensity suggests a strong research focus, typically associated with research universities, whereas a low PhD intensity points to a greater emphasis on undergraduate education, commonly seen in teaching-focused institutions or colleges. This metric helps differentiate institutions by their research mission, allocation of resources and overall academic profile. In this analysis, institutions with a PhD intensity above 0.03 (i.e. at least 3 doctoral graduates per 100 non-doctoral graduates) are categorised as more research oriented.

Figure D5.2 displays student-academic staff ratios by research orientation. In most countries with available data, institutions with higher PhD intensity typically have lower student-academic staff ratios. However, in Austria, Croatia, Greece and Switzerland, it is the less research-intensive institutions which have the lower ratios.

In Finland, Norway and the United Kingdom, student-to-academic staff ratios in less research-intensive institutions are at least twice those in more research-oriented institutions. Finland has the largest absolute gap: on average, academic staff in research-intensive institutions are associated with 13 fewer students than those in less research-intensive institutions. In Finland, this difference is largely explained by institutional types: universities tend to be more research-oriented and offer doctoral degrees, whereas universities of applied sciences focus more on teaching and do not offer doctoral programs. This structural distinction likely contributes significantly to the differences in staff-to-student ratios. Additionally, this discrepancy may be due, in part, to how doctoral students are accounted for in institutional data – being included as both enrolled students and as part of academic staff. This dual classification can skew the ratio, especially in countries like Finland where PhD students are often actively involved in teaching and research. In the Republic of Türkiye, student-academic staff ratios also differ significantly in absolute terms, even though both types of institution report ratios at or above 18:1. This may reflect a structural concentration of academic staff in specialised or academically focused universities, which can reduce the ratio despite overall high enrolment (Figure D5.2).

Figure D5.2. Ratio of students to academic staff, by research intensity (2023)



Note: Tertiary institutions with over 90% of students in distance learning programmes are excluded.
1. Year of reference differs from 2023: 2022 for Denmark, Greece, Poland and Spain.
Source: Data based on European Higher Education Sector Observatory (EHESO) (2025). Please note that the reference year in the EHESO database is 2022, which corresponds to the academic year 2022/2023 and is shown as 2023 in this publication.

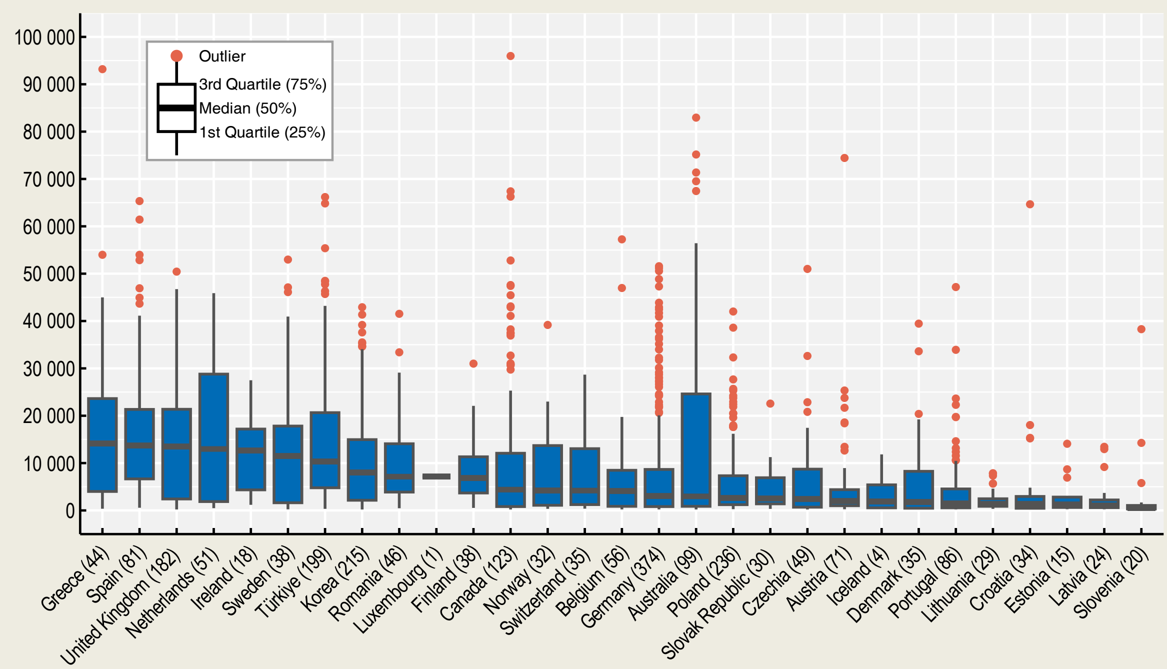
By contrast, countries such as Portugal and Switzerland display relatively small differences in student-academic staff ratios between the two institutional groups – with a difference of fewer than three students per academic staff member. This suggests a more uniform distribution of academic resources across institutions regardless of research orientation. Among these two countries, Portugal shows higher student-to-academic staff ratios for both groups, while Switzerland maintains low ratios across the board (Figure D5.2). These patterns reflect broader national differences in higher education funding, academic workforce policies and institutional structures, as discussed in the section above.

How do tertiary institutions differ by size?

The size of a tertiary institution is a fundamental characteristic that influences multiple aspects of the higher education system, including accessibility, resource distribution and the potential for economies of scale – each with important policy implications. Larger institutions often benefit from more stable funding streams, extensive infrastructure and greater research capacity. In contrast, smaller institutions may provide more personalised learning environments, with closer student-teacher interactions and specialised academic offerings. Analysing how institutional sizes vary across countries can offer valuable insights into the efficiency and equity of national higher education systems.

Figure D5.3 displays a box plot of tertiary institution sizes by country. Among countries with available data, Greece has the highest median tertiary institution size, at around 15 000 students, indicating a system concentrated in larger institutions. In contrast, Slovenia has the smallest median size, with only around 480 students, suggesting a landscape dominated by smaller institutions. As well as ranking fourth in terms of median institution size, at around 13 000 students, the Netherlands also displays the widest interquartile range. This reflects significant variation in the number of students enrolled across institutions, while the lack of outliers suggests that this variation is consistent across the system rather than driven by extreme cases. The Dutch system is notable for its large student population – approximately 900 000 enrolments (OECD, 2025[2]) concentrated in just 51 institutions. This characteristic is partly a result of historical education policy reforms. Notably, the 1983 white paper titled "Scale-enlargement, Task-reallocation and Concentration (STC)" proposed a major restructuring of the universities of applied sciences (HBO) in the Netherlands. The aim was to increase institutional size through mergers, enhance institutional autonomy and improve efficiency through economies of scale (Lang, 2003[15]; OECD, 2002[16]). These reforms have had a lasting impact, shaping Dutch higher education into a system with fewer but significantly larger institutions.

Figure D5.3. Distribution of tertiary institutions by size (2023)



Note: The number in parentheses indicates the number of tertiary institutions. Tertiary institutions with over 90% of students in distance learning programmes and institutions with enrolment in bachelor's, master's, and doctoral programmes (ISCED levels 6 to 8) below 200 are excluded. This analysis focuses on bachelor's, master's, and doctoral programmes (ISCED levels 6 to 8).
1. Year of reference differs from 2023: 2022 for Greece, Poland and Romania.
Source: Data based on European Higher Education Sector Observatory (EHESO) (2025). Please note that the reference year in the EHESO database is 2022, which corresponds to the academic year 2022/2023 and is shown as 2023 in this publication. Data for Australia, Canada, Iceland and Korea are from national data source.

Several countries – such as Luxembourg and Iceland – exhibit relatively tight distributions, without notable outliers and institution sizes clustered closely around the median. This suggests systems characterised by uniformity in institutional scale, reflecting the influence of small national populations and a limited number of tertiary institutions, which naturally promote structural consistency across the sector. Similar patterns are observed in Austria, Croatia, Estonia, Latvia, Lithuania and Slovenia, where the compact spread of institution sizes further underscores the role of demographic and systemic constraints in shaping higher education landscapes. Meanwhile, countries such as Belgium, Canada, Finland, Norway and Switzerland show moderate median enrolments, controlled spreads and occasional outliers, indicating a balanced but diverse institutional profile. These systems typically combine standardisation and differentiation, often shaped by binary or tiered structures, strong national policy co-ordination and efforts to accommodate both general academic and applied or vocational education pathways (Figure D5.3).

Overall, the analysis highlights marked variation in the size distribution of tertiary institutions across countries. These differences may be influenced by several factors, including the total number of institutions, demographic trends and the urban-rural distribution of the population. In addition, national policies – such as funding allocation models, governance frameworks and strategic priorities for institutional consolidation or expansion – play a critical role in shaping institutional sizes (OECD, 2020[1]; Williams, 2017[17]).

Age distribution of academic staff

The age distribution of the academic workforce varies considerably across countries and levels of tertiary education. It can be affected by a variety of factors, such as the level of development of tertiary institutions in the country, the size and age distribution of the population, the duration of tertiary education, and staff salaries and working conditions. More time spent in tertiary education can delay the entry of academic staff into the labour market. At the same time, competitive salaries, good working conditions for permanent staff and career development opportunities may have attracted young people into academic professions in some countries or helped to retain effective academic staff in others.

Young staff members (under the age of 30) only account for a small proportion of academic staff on average across OECD countries: 6% in short-cycle tertiary education and 9% at bachelor’s, master’s and doctoral level combined. At short-cycle tertiary level, young staff make up less than 10% of the academic workforce in all countries except for Luxembourg, New Zealand and Norway (Table D5.2). This pattern is not unexpected, as a doctoral degree is often a prerequisite for entry into an academic career, especially at bachelor’s, master’s and doctoral level, and individuals typically complete their doctoral studies in their late twenties or later.

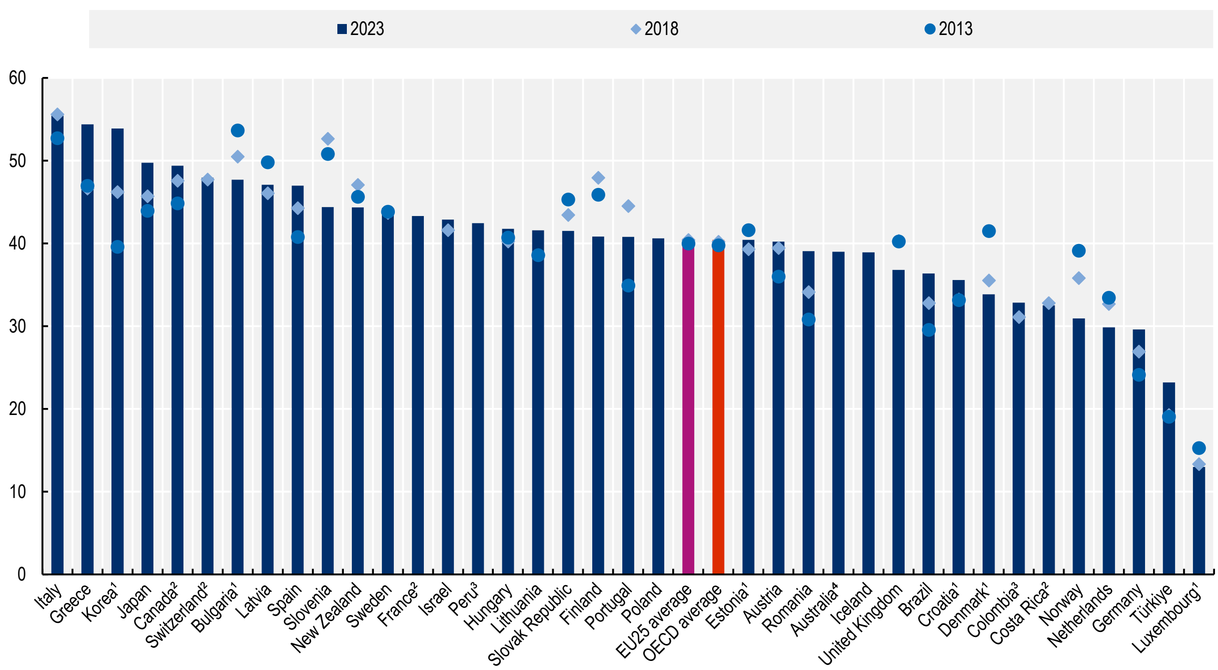
On average across OECD countries, 40% of academic staff are aged 50 or over. However, this share varies widely across countries, from just 13% in Luxembourg – where the academic workforce is relatively young due to the recent development of the higher education system – to 55% in Italy (Figure D5.4). Variations in the age structure of academic staff are influenced not only by retention rates but also by the historical timing of higher education system expansion and recent recruitment trends. In countries where higher education systems experienced substantial growth several decades ago, a large share of the staff hired during that period will now be reaching their late career stages. Similarly, limited recruitment in recent years may contribute to a higher concentration of older staff. Although a larger proportion of older and experienced academic staff may indicate strong institutional capacity and experience, it also underscores the importance of planning for future workforce renewal and ensuring sustainable academic career pathways for younger scholars.

Academic staff often follow different retirement trajectories to other professional groups. Academic careers typically require many years of training and progression, involve a strong long-term commitment to scholarly work, and often mean starting a first full-time position later than in other professions (Sugar et al., 2005[18]). One factor influencing the age profile of academic staff is national legislation on retirement age (Eurydice, 2025[19]). However, actual retirement patterns can be difficult to predict, as many academics continue working beyond the statutory retirement age (Baldwin, Belin and Say, 2018[20]).

Trends in academic staff ages

Figure D5.4. Trends in the share of academic staff aged 50 and over (2013, 2018 and 2023)

In per cent



1. Year of reference differs from 2013.
2. Public institutions only.
3. Year of reference differs from 2023.
4. Excludes short-cycle tertiary.
For data, see Table D5.2. For a link to download the data, see Tables and Notes section.

On average across OECD countries, the share of academic staff aged 50 and over has remained stable at around 40% between 2013 and 2023 for all levels of tertiary education combined. However, this average masks growing disparities across countries. In more than half of OECD and partner countries with available data, the proportion of academic staff in this age group has steadily increased from 2013 to 2018 and 2023. Notably, Greece, Korea and Romania experienced increases of at least 7 percentage points over this period. While the share of older academic staff in Romania remains below the OECD average, in Greece it is already more than 10 percentage points higher than the OECD average. In Greece, the increase may be partly attributable to reduced recruitment -- fiscal constraints following the financial crisis are likely to have limited new hiring (Figure D5.4).

In contrast, several countries have experienced a shift toward a younger academic workforce. In Bulgaria, Denmark, Luxembourg, the Netherlands, Norway and the Slovak Republic, the share of academic staff aged 50 and over has consistently declined over the past decade. In Estonia, Finland, Latvia, New Zealand and Slovenia, the share increased slightly during some periods but showed an overall decrease between 2013 and 2023 (Figure D5.4). These trends may partly reflect targeted recruitment policies aimed at attracting both national and international talent. For example, in Norway, the Research Council of Norway (RCN) has implemented a range of initiatives to stimulate interest in research careers, including the Science Knowledge Project for children (*Nysgjerrigpe*r), the Proscientia Project for youth aged 12-21 and the Annual Science Week. The RCN also offers awards such as the Young Excellent Researchers award, which requires applicants to demonstrate strong scientific merit, leadership potential and international experience (OECD, 2019[21]). In addition, some countries have introduced mandatory retirement ages or implemented measures to encourage early retirement, further contributing to generational renewal in the academic workforce (Ackers and Gill, 2005[22]; Courty and Sim, 2015[23]).

Gender profile of academic staff

Men make up a small majority of academic staff across OECD countries, averaging 54% of the total. The share of women among academic staff at all levels of tertiary education combined ranges from 31% in Japan to 55% or more in Iceland, Latvia and Lithuania (Figure D5.5).

The gender profile of academic staff also differs across levels within tertiary education. On average across OECD countries, women account for 53% of academic staff in short-cycle tertiary programmes, compared to 45% in bachelor's, master's and doctoral programmes. In only nine OECD and partner countries do bachelor's, master's and doctoral programmes have a larger share of female academic staff than short-cycle tertiary programmes, by 9 percentage points or more in Germany, Peru and Saudi Arabia – countries where short-cycle programmes account for a relatively small share of tertiary provision. In contrast, in Belgium, Czechia and Japan, the share of women in short-cycle programmes exceeds that in longer tertiary programmes by more than 20 percentage points (Table D5.3). This disparity may be linked to the subject areas commonly offered at the short-cycle level, which are often concentrated in fields with higher representation of female academic staff (OECD, 2025[24]). In Czechia, for example, the only field offered at this level is arts and humanities. In Belgium, over half of students in short-cycle programmes are enrolled in health and welfare fields. In Japan, the distribution is more diverse but includes a high concentration of students in education, arts and humanities, and health-related programmes – all areas typically associated with a greater presence of women in the academic workforce.

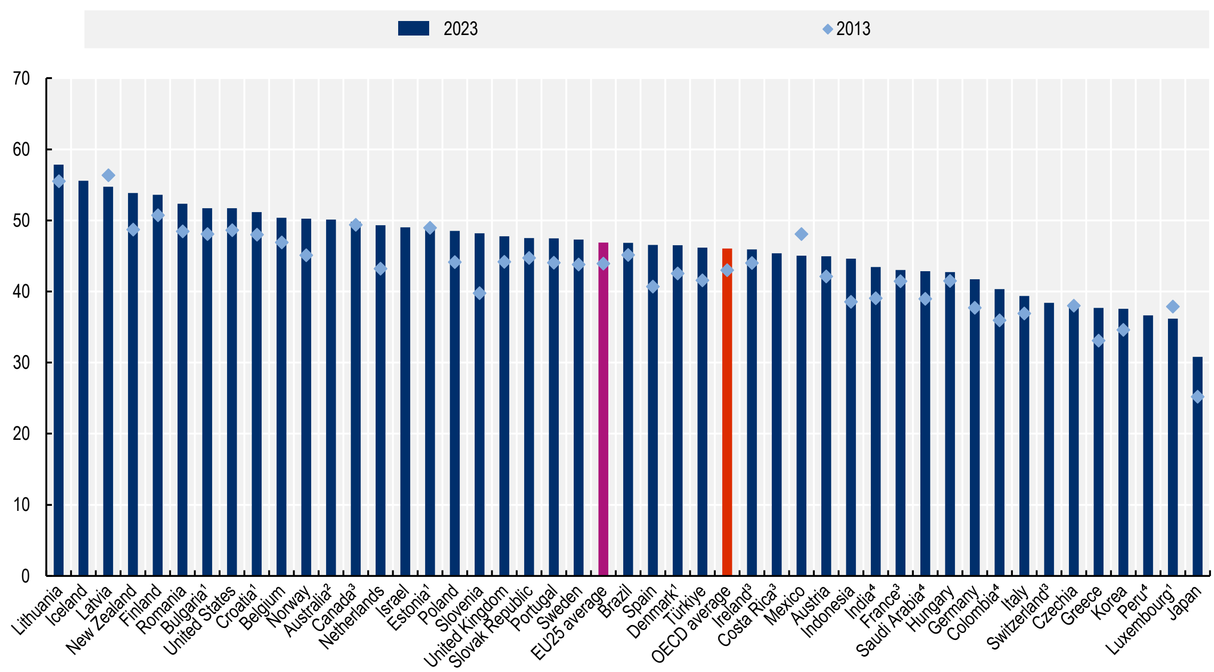
On average across OECD countries, women represent 52% of academic staff under the age of 30. However, their representation decreases with age, with women accounting for 43% of academic staff aged 50 or older (Table D5.3). This suggests that the overall gender imbalance in academia is influenced by older age cohorts. While this may imply that gender parity could improve over time as younger cohorts advance, it also raises the question of whether women face barriers to progressing into more senior academic roles at the same rate as their male counterparts (see Box D5.2).

Early-career female academics often face similar challenges to their male counterparts, such as precarious employment contracts and the pressure to publish extensively to secure career advancement. However, these challenges can be compounded for women due to persistent gendered expectations and responsibilities, such as family and household duties, which continue to fall disproportionately on them in many contexts. Women's careers and progression in academia are more likely to be affected by family responsibilities and the absence of formal policies designed to support gender equity (Winslow and Davis, 2016[25]). Despite encouraging trends in female representation among younger academics, the increasing reliance on temporary and part-time contracts in higher education institutions has particularly impacted early-career researchers, with women being more likely to occupy these less secure positions. The combination of job insecurity and the "publish or perish" culture can also hinder the retention and progression of women in academia (OECD, 2024[26]).

Trends in the share of female academic staff

Figure D5.5. Trends in the share of women among academic staff (2013 and 2023)

In per cent



1. Year of reference differs from 2013.
2. Excludes short-cycle tertiary.
3. Public institutions only.
4. Year of reference differs from 2023.
For data, see Table D5.3. For a link to download the data, see Tables and Notes section.

Although the gender imbalance remains, the representation of women in tertiary education has increased in most OECD countries over the past decade. Between 2013 and 2023, the average share of women among academic staff across OECD countries rose by 3 percentage points, from 43% to 46% (OECD, 2025[27]). Among countries with available data, the Netherlands and Slovenia recorded the largest gains: in the Netherlands the share of women increased from 43% in 2013 to 49% in 2023, and in Slovenia it increased from 40% to 48% (Figure D5.5).

Nevertheless, gender disparities remain a significant challenge across most OECD countries. Inequalities begin at the doctoral level and widen throughout academic career paths (European Commission, 2024[28]). Female researchers are also more likely than men to hold temporary or non-standard contracts, and notable gender pay gaps persist in scientific research and development occupations. Addressing these structural challenges is essential to building more inclusive and equitable academic systems.

In response, several OECD countries and economies have introduced structural reforms to improve the representation of women in academic roles. At the European level, the EU has supported initiatives such as the Institutional Transformation for Effecting Gender Equality in Research (INTEGER) project, which aims to strengthen the career development of female researchers in higher education and research institutions (European Commission, 2016[29]). In Germany, the Women Professors Programme (WPP) was launched to increase the number of female professors and promote structural change within higher education institutions. In the Flemish Community of Belgium, the share of women in research positions is included among the indicators used for performance-based research funding. Similarly, Norway offers additional funding to institutions that increase appointments of female faculty (OECD, 2019[21]).

Many of these initiatives are embedded within broader equal opportunity frameworks that also address other dimensions of diversity, including ethnicity, disability, age, religion, political beliefs and sexual orientation. In the United Kingdom, for instance, the Equality Challenge Unit was established by the Higher Education Funding Council for England (HEFCE) to support universities in advancing equality across the sector (HEFCE, 2010[30]). While these policy efforts represent important progress, gender disparities persist in academic participation, working conditions and pay. Sustained investment, institutional commitment and further research are needed to ensure more inclusive and equitable academic environments.

Box D5.2. Classification of academic staff

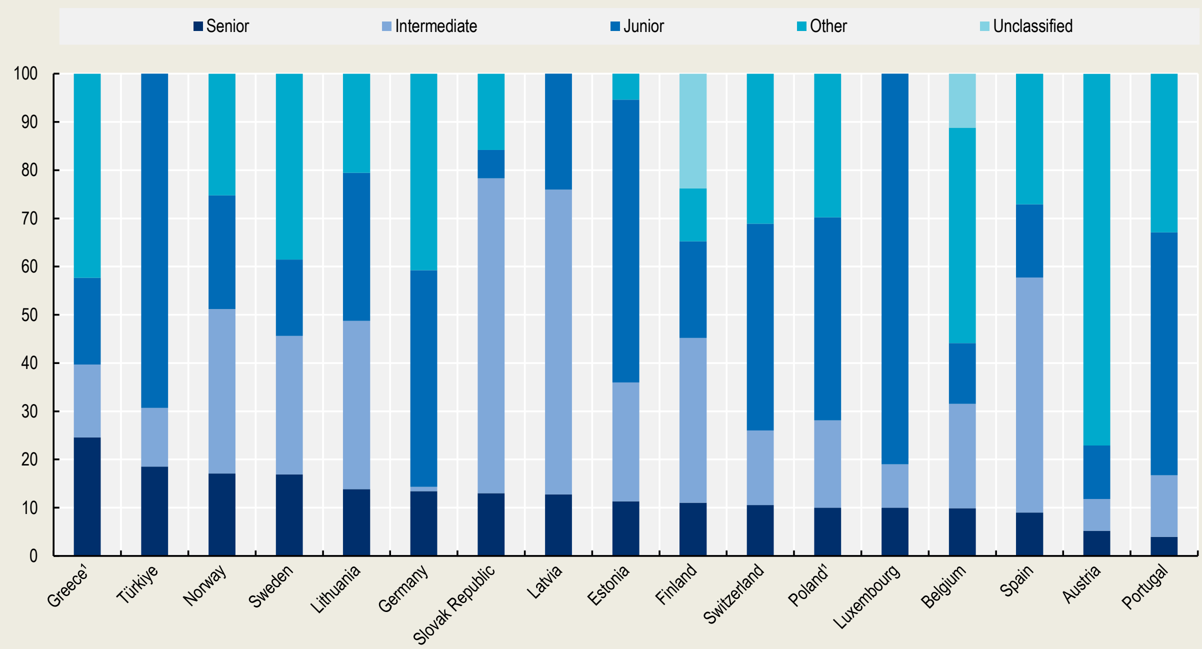
Seniority in academia reflects both the level of professional competence and the nature of assigned tasks and responsibilities. It is also a key determinant of contractual stability within the academic profession (Eurydice, 2025[19]). Moreover, seniority interacts with other important factors like the age distribution of academic staff and gender dynamics. Seniority is often closely linked to age, as academic careers typically follow a progressive trajectory from junior to senior roles. However, variations in the timing of career milestones (such as obtaining a PhD, securing a permanent contract or achieving tenure) can lead to differences in seniority even among similarly aged staff. In systems where career progression is slow or highly competitive, older academics might still be in junior or precarious positions, which raises concerns about long-term career sustainability.

Seniority also intersects significantly with gender. Although the share of female academic staff is growing, in many higher education systems, women are under-represented in senior academic positions despite near parity or even majority representation at the entry level. Structural barriers – such as gender bias in promotion processes, unequal access to research funding and the impact of career breaks for caregiving – can hinder women's advancement (OECD, 2021[31]). This creates a gender imbalance at the top tiers of academia, often referred to as the "leaky pipeline". Hence, understanding the composition of academic staff by seniority level is vital for addressing issues related to career progression, ensuring equitable opportunities across diverse demographics and fostering an inclusive academic environment.

The classification of tertiary academic staff defines seniority levels hierarchically according to career progression. Staff can be divided into four categories: junior, intermediate, senior and other. Junior refers to entry grades/posts into which an individual would normally be recruited to begin their academic career. Intermediate includes academic staff pursuing an academic career working in positions below the top positions but more senior than entry-level positions. Senior refers to the highest grades/posts for academic staff pursuing an academic career. Lastly, the other category includes instructional and research personnel who are not considered to be on an academic career track, excluding doctoral candidates, and teaching and research assistants.

Figure D5.6. Distribution of academic staff, by seniority level (2023)

In per cent



Note: Tertiary institutions with over 90% of students in distance learning programmes are excluded.
1. Year of reference differs from 2023: 2022 for Greece and Poland.
Source: Data based on European Higher Education Sector Observatory (EHESO) (2025). Please note that the reference year in the EHESO database is 2022, which corresponds to the academic year 2022/2023 and is shown as 2023 in this publication.

Figure D5.6 shows the distribution of academic staff by seniority level across countries. In Estonia, Germany, Luxembourg, Poland, Portugal, Switzerland and Türkiye, junior staff represent the largest share. In contrast, the intermediate level is the most common in Finland, Latvia, Lithuania, Norway, Spain and the Slovak Republic. Having a high proportion of more junior, lower-cost staff may reduce costs, but raises questions about institutional capability and the quality of academic work (Winslow and Davis, 2016[25]; Australian Government, 2018[32]). In terms of the share of senior staff, Portugal is the country with the smallest share among countries with available data – 4% academic staff are senior. In order to balance cost and quality, Portugal has legislated to impose a minimum number of staff in senior categories (OECD, 2020[1]).

Definitions

Academic staff include personnel whose primary assignment is instruction or research, or both. Teaching staff also include departmental chairs whose duties include some teaching but exclude non-professional personnel who support teachers in providing instruction to students, such as teachers' aides and other paraprofessional personnel.

Methodology

The ratio of students to academic 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 academic staff at that level and in similar types of institutions.

For the ratio of students to academic staff to be meaningful, consistent coverage of personnel and enrolment data are needed. For instance, if academic staff in religious institutions are not reported in the personnel data, then students in those institutions are also excluded.

Personnel data is based on headcounts for the calculated indicators included in the analysis in Box D5.1 and Box D5.2.

Source

Data refer to the reference year 2023 (academic year 2022/23) and are based on the UNESCO-UIS/OECD/Eurostat data collection on education statistics administered by the OECD in 2024/25. For more information see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Data from Argentina, the People's Republic of China, India, Indonesia, Saudi Arabia and South Africa are from the UNESCO Institute of Statistics (UIS).

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Tables and Notes

Chapter D5 Tables

Table D5.1	Ratio of students to academic staff, by tertiary education level and type of institution (2023)
Table D5.2	Age distribution of academic staff, by tertiary education level (2013, 2018 and 2023)
Table D5.3	Share of women among academic staff, by tertiary education level and age group (2013, 2018 and 2023)

StatLink https://stat.link/vdryh8

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D5.1. Ratio of students to academic staff by tertiary level of education and type of institution (2023)

1. Year of reference differs from 2023: 2022 for Colombia, Peru and Saudi Arabia.
2. Year of reference differs from 2013: 2014 for Denmark, Estonia, Luxembourg, Bulgaria and Croatia.
3. Tertiary includes staff and students from post-secondary non-tertiary level.

Table D5.2. Age distribution of academic staff, by tertiary level of education (2013, 2018, 2023)

1. Public institutions only.
2. Year of reference differs from 2023: 2022 for Colombia and Peru.
3. Year of reference differs from 2013: 2014 for Denmark, Estonia, Korea, Luxembourg, Bulgaria and Croatia.
4. Post-secondary non-tertiary teachers may teach at tertiary level - see Annex 3 for further details.

Table D5.3. Share of women among academic staff, by tertiary level of education and age group (2013, 2018, 2023)

1. Public institutions only.
2. Year of reference differs from 2023: 2022 for Colombia, India, Peru and Saudi Arabia.
3. Year of reference differs from 2013: 2015 for Denmark, Estonia, Luxembourg, Bulgaria and Croatia.
4. Post-secondary non-tertiary teachers may teach at tertiary level - see Annex 3 for further details.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table D5.1. Ratio of students to academic staff, by tertiary education level and type of institution (2023)

	Short-cycle tertiary			Bachelor's, master's and doctoral or equivalent			All tertiary				
	Public institutions	Private institutions	All institutions	Public institutions	Private institutions	All institutions	Public institutions	Private institutions	All institutions		
	2023	2023	2023	2023	2023	2023	2023	2023	2013	2018	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Australia	m	m	m	19	29	19	m	m	m	m	m
Austria	9	10	9	16	14	16	14	13	15	14	14
Belgium	33	14	18	28	19	22	28	19	21	21	22
Canada	m	m	m	22	m	m	m	m	m	m	m
Chile	m	m	m	m	m	m	m	m	m	m	m
Colombia[1]	48	7	24	23	32	28	30	23	19	28	26
Costa Rica	x(7)	m	m	x(7)	m	m	13	m	m	m	m
Czechia	10	14	11	17	17	17	17	17	22	15	17
Denmark[2]	23	26	23	14	19	14	14	22	14	16	14
Estonia[2]	a	a	a	11	37	11	11	37	15	13	11
Finland	a	a	a	13	18	15	13	18	14	15	15
France	9	m	m	16	m	m	15	m	m	m	m
Germany	11	12	12	10	20	11	10	20	12	12	11
Greece	a	a	a	49	a	49	49	a	m	m	49
Hungary	x(4)	x(5)	x(6)	11[d]	10[d]	10[d]	11	11	14	12	11
Iceland	x(4)	x(5)	x(6)	7[d]	12[d]	8[d]	7	12	m	m	8
Ireland	x(7)	m	m	x(7)	m	m	19	m	m	m	m
Israel	16	18	17	17	16	16	16	16	m	m	14
Italy	a	a	a	19	22	20	19	22	19	20	20
Japan	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m
Latvia	11	x(8)	x(11)	a	x(8)	x(11)	11	16	20	16	15
Lithuania	a	a	a	13	24	14	13	24	17	14	14
Luxembourg[2]	8	a	8	4	a	4	4	a	8	4	4
Mexico	x(7)	x(8)	x(11)	x(7)	x(8)	x(11)	18	16	14	18	18
Netherlands	a	14	14	11	15	14	11	15	15	15	14
New Zealand	16	12	15	17	16	17	17	13	17	17	16
Norway	14	19	16	8	20	9	8	20	10	9	9
Poland	11	55	18	10	34	12	10	34	15	14	12
Portugal	x(4)	x(5)	x(6)	12[d]	14[d]	12[d]	12	14	14	14	12
Slovak Republic	8	8	8	12	19	12	12	17	14	11	12
Slovenia	13	12	13	12	11	11	12	11	18	14	12
Spain	9	15	10	11	18	13	11	17	12	12	12
Sweden	10	11	10	10	11	10	10	11	11	10	10
Switzerland	m	m	m	14	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m
United Kingdom	a	x(8)	x(11)	a	x(8)	x(11)	a	14	18	15	14
United States[3]	x(7)	x(8)	x(11)	x(7)	x(8)	x(11)	14[d]	11[d]	15[d]	14[d]	13[d]
OECD average	15	16	14	15	20	15	15	18	15	15	15
Partner and/or accession countries											
Argentina	m	m	m	m	m	m	m	m	m	m	m
Brazil	2	31	4	10	62	29	10	62	23	24	29
Bulgaria[2]	a	a	a	11	16	12	11	16	13	12	12
China	m	m	m	m	m	m	m	m	m	m	m
Croatia[2]	a	a	a	11	13	11	11	13	13	13	11
India	a	a	a	46	19	26	46	19	22	25	26
Indonesia	44	23	31	57	23	33	55	23	27	27	33
Peru[1]	23	24	24	17	33	27	17	33	m	19	27
Romania	a	a	a	19	24	19	19	24	21	20	19
Saudi Arabia[1]	108	m	81	18	m	18	19	18	21	19	19
South Africa	m	m	m	m	m	m	m	m	m	m	m
EU25 average	13	17	13	15	19	15	15	19	15	14	15
G20 average	35	22	32	24	29	22	23	23	19	19	20

Note: See under Chapter D5 Tables for StatLink and for the notes related to this Table.

Table D5.2. Age distribution of academic staff, by tertiary education level (2013, 2018 and 2023)

	2023									2018			2013		
	Short-cycle tertiary			Bachelor's, master's and doctoral or equivalent			All tertiary			All tertiary			All tertiary		
	< 30 years	30-49 years	>= 50 years	< 30 years	30-49 years	>= 50 years	< 30 years	30-49 years	>= 50 years	< 30 years	30-49 years	>= 50 years	< 30 years	30-49 years	>= 50 years
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Australia	m	m	m	4	57	39	m	m	m	m	m	m	m	m	m
Austria	6	46	48	10	51	39	9	50	40	9	52	39	8	56	36
Belgium	9	59	32	m	m	m	m	m	m	m	m	m	m	m	m
Canada[1]	7	46	47	3	44	53	5	45	49	5	47	48	9	47	45
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia[2]	6	66	28	5	60	35	5	62	33	8	61	31	m	m	m
Costa Rica[1]	x(7)	x(8)	x(9)	x(7)	x(8)	x(9)	4	64	33	7	61	33	m	m	m
Czechia	5	43	52	m	m	m	m	m	m	m	m	m	m	m	m
Denmark[3]	2	45	53	20	48	33	19	48	34	17	47	35	6	53	41
Estonia[3]	a	a	a	4	55	40	4	55	40	5	56	39	6	52	42
Finland	a	a	a	11	48	41	11	48	41	8	44	48	8	46	46
France[1]	9	52	39	10	46	44	10	47	43	m	m	m	m	m	m
Germany	4	41	54	23	48	29	23	48	30	25	49	27	25	51	24
Greece	a	a	a	1	45	54	1	45	54	1	53	47	1	52	47
Hungary	x(4)	x(5)	x(6)	5[d]	53[d]	42[d]	5	53	42	6	54	40	6	54	41
Iceland	x(4)	x(5)	x(6)	14[d]	48[d]	39[d]	14	48	39	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	9	52	39	12	45	44	11	46	43	10	48	42	m	m	m
Italy	a	a	a	1	44	55	1	44	55	1	44	56	1	46	53
Japan[4]	6	48	46	2	48	51	3	48	50	3	52	46	3	53	44
Korea[3]	2	48	50	1	45	55	1	45	54	1	53	46	2	59	40
Latvia	2	46	53	4	50	46	4	49	47	6	48	46	5	45	50
Lithuania	a	a	a	5	54	42	5	54	42	5	56	39	7	54	39
Luxembourg[3]	11	64	26	34	54	12	33	54	13	26	60	13	30	55	15
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	9	51	40	20	51	29	19	51	30	18	49	33	19	48	33
New Zealand	12	43	46	11	44	44	11	44	44	9	44	47	9	45	46
Norway	11	46	43	24	45	31	24	45	31	20	44	36	16	45	39
Poland	0	39	61	4	56	41	4	56	41	m	m	m	m	m	m
Portugal	x(4)	x(5)	x(6)	11[d]	48[d]	41[d]	11	48	41	4	52	44	5	60	35
Slovak Republic	5	47	47	4	55	41	4	54	42	5	52	43	7	48	45
Slovenia	4	36	59	6	52	43	6	50	44	1	47	53	0	49	51
Spain	6	55	39	3	47	50	4	49	47	4	52	44	2	57	41
Sweden	6	50	44	6	50	44	6	50	44	5	52	44	5	51	44
Switzerland[1]	m	m	m	3	49	48	3	49	48	3	50	48	m	m	m
Türkiye	7	76	17	15	61	24	14	63	23	18	63	19	17	64	19
United Kingdom	x(7)	x(8)	x(9)	x(7)	x(8)	x(9)	6	57	37	8	52	40	7	53	40
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
OECD average	6	50	44	9	50	41	9	51	40	8	51	40	9	52	40
Partner and/or accession countries															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	0	57	43	4	60	36	4	60	36	6	61	33	8	62	30
Bulgaria[3]	a	a	a	5	47	48	5	47	48	5	44	50	5	41	54
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia[3]	a	a	a	9	56	36	9	56	36	8	58	33	11	56	33
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru[2]	6	66	28	4	53	42	4	53	42	m	m	m	m	m	m
Romania	a	a	a	3	58	39	3	58	39	2	64	34	5	64	31
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	6	48	46	9	51	40	9	51	41	8	52	40	8	52	40
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: See under Chapter D5 Tables for StatLink and for the notes related to this Table.

Table D5.3. Share of women among academic staff, by tertiary education level and age group (2013, 2018 and 2023)

Percentage of female teachers in public and private institutions by age group and level of education

	2023									2018			2013		
	Short-cycle tertiary			Bachelor's, master's and doctoral or equivalent			All tertiary			All tertiary			All tertiary		
	All ages	< 30 years	>= 50 years	All ages	< 30 years	>= 50 years	All ages	< 30 years	>= 50 years	All ages	< 30 years	>= 50 years	All ages	< 30 years	>= 50 years
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Australia	m	m	m	50	56	48	m	m	m	m	m	m	m	m	m
Austria	52	71	47	44	51	39	45	53	40	43	53	38	42	54	37
Belgium	84	72	85	49	59	48	50	61	49	48	67	44	47	64	41
Canada[1]	53	59	48	45	53	40	50	57	45	49	60	44	49	58	45
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia[2]	41	49	32	40	47	33	40	47	33	38	47	30	36	m	m
Costa Rica[1]	x(7)	x(8)	x(9)	x(7)	x(8)	x(9)	45	47	40	44	46	38	m	m	m
Czechia	60	49	60	38	56	70	38	55	69	38	m	m	38	87	81
Denmark[3]	45	58	41	47	45	44	47	45	43	44	44	40	43	44	37
Estonia[3]	a	a	a	49	56	46	49	56	46	49	54	45	49	52	46
Finland	a	a	a	54	49	53	54	49	53	52	47	52	51	48	50
France[1]	49	49	46	42	45	38	43	46	39	44	55	38	41	53	35
Germany	33	34	33	42	48	33	42	48	33	40	45	31	38	45	26
Greece	a	a	a	38	59	35	38	59	35	35	45	32	33	49	29
Hungary	x(4)	x(5)	x(6)	43[d]	49[d]	39[d]	43	49	39	41	46	36	41	46	37
Iceland	x(4)	x(5)	x(6)	56[d]	57[d]	53[d]	56	57	53	m	m	m	m	m	m
Ireland	x(7)	m	m	x(7)	m	m	46	m	m	45	m	m	44	m	m
Israel	56	69	50	48	52	46	49	54	46	49	53	45	m	m	m
Italy	a	a	a	39	51	36	39	51	36	37	50	34	37	52	31
Japan[4]	50	60	49	26	35	24	31	47	28	28	49	25	25	47	21
Korea	48	72	41	35	61	26	38	65	29	36	66	23	35	56	16
Latvia	67	94	72	53	49	53	55	52	55	56	56	55	56	53	52
Lithuania	a	a	a	58	58	59	58	58	59	56	55	53	55	56	49
Luxembourg[3]	49	60	40	35	38	27	36	38	29	36	36	30	38	45	27
Mexico	x(7)	m	m	x(7)	m	m	45	m	m	m	m	m	48	m	m
Netherlands	54	61	47	49	51	41	49	51	42	46	50	36	43	50	33
New Zealand	54	51	53	54	60	50	54	59	50	51	52	50	49	51	46
Norway	43	46	38	50	50	48	50	50	48	46	44	44	45	41	42
Poland	69	0	65	49	55	42	49	55	42	45	m	m	44	m	m
Portugal	x(4)	x(5)	x(6)	47[d]	47[d]	43[d]	47	47	43	45	46	40	44	52	37
Slovak Republic	62	50	61	47	53	46	47	53	46	46	57	43	45	52	39
Slovenia	50	58	47	48	49	45	48	50	45	42	86	38	40	50	35
Spain	54	55	52	44	49	39	47	52	42	44	49	38	41	57	34
Sweden	45	43	44	47	48	46	47	48	46	45	48	43	44	50	42
Switzerland[1]	m	m	m	38	53	32	38	53	32	35	54	30	m	m	m
Türkiye	43	60	30	47	56	35	46	56	34	44	54	31	42	53	30
United Kingdom	x(7)	x(8)	x(9)	x(7)	x(8)	x(9)	48	51	44	45	48	42	44	48	40
United States	x(7)	m	m	x(7)	x(8)	x(9)	52	m	m	50	m	m	49	m	m
OECD average	53	55	49	45	51	42	46	52	43	44	52	39	43	52	38
Partner and/or accession countries															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	46	0	45	47	53	44	47	53	44	46	50	42	45	49	41
Bulgaria[3]	a	a	a	52	49	50	52	49	50	50	45	45	48	48	43
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia[3]	a	a	a	51	54	46	51	54	46	49	52	43	48	58	39
India[2]	m	m	m	m	m	m	43	m	m	42	m	m	39	m	m
Indonesia	46	m	m	44	m	m	45	m	m	43	m	m	39	m	m
Peru[2]	27	27	28	37	45	32	37	45	32	m	m	m	m	m	m
Romania	a	a	a	52	53	49	52	53	49	51	55	42	48	54	35
Saudi Arabia[2]	27	m	m	43	m	m	43	m	m	41	m	m	39	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	55	54	53	47	51	44	47	51	45	45	52	41	44	53	40
G20 average	m	m	m	m	m	m	44	m	m	42	m	m	41	m	m

Note: See under Chapter D5 Tables for StatLink and for the notes related to this Table.

Chapter D6. What admission systems are used in tertiary education?

Highlights

- Nearly half of the countries and economies with available data have a non-selective admission system for first degrees in public and private institutions. Such open admission allow all applicants meeting the minimum qualification level required to be admitted, providing a broad access to tertiary education.
- The most widely used types of examination used for admission to first degree tertiary education are national or central examinations, taken towards the end of upper secondary education, and entrance examinations administered by tertiary institutions.
- The share of applicants who are accepted to tertiary programmes ranges from 34% in Scotland (United Kingdom) to 95% in France. In three-quarters of countries and economies with available data, close to 60% (or more) of applicants are accepted, while in the remaining quarter, less than half (42% or less) of applicants are accepted.

Context

Increasing numbers of students are enrolling in tertiary education across OECD countries. This expansion in enrolment reflects a variety of factors. More students are achieving the minimum educational attainment required to enter tertiary institutions, which increases the potential demand for tertiary education (see Chapter B3 in OECD (2024[1])). At the same time, the positive relationship between educational attainment and opportunities in the labour market may further enhance demand, especially in countries with high unemployment rates or when there is an economic crisis: the strong personal financial incentives to invest in education could encourage individuals with a secondary qualification to continue their studies (see Chapters A3 and A4).

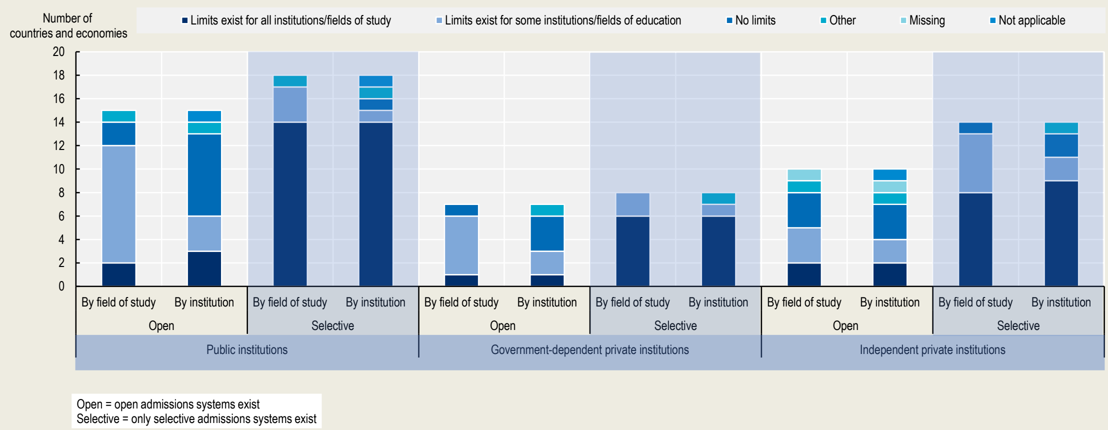
Tertiary enrolment is also affected by the number of places available within tertiary educational institutions. Given the rising demand for tertiary education, educational institutions and policy makers face new challenges in ensuring there are enough student places. In the meantime, increased demand could result in increased competition to enter tertiary education. Decisions about the number of places available in the different fields of study are more strongly linked to the needs of the labour market in some countries than in others. Ensuring a match between the skills of the tertiary-educated population and labour-market demand may have an impact on enrolment and how selective admissions to different fields of study are in tertiary education.

Admission systems to tertiary education may be designed to balance different objectives. In some cases, admissions criteria may be used to ensure applicants have the skills to successfully complete the educational programme in question (see Chapter B5). In other cases, having fewer criteria may help to provide more widespread access to tertiary education, meeting equity concerns.

Analysis of the national criteria and admission systems for students to apply for and enter first degree tertiary programmes highlights differences between open and selective admission systems and the proportions of applicants who successfully meet the criteria and processes. However, the analysis here does not cover the selectivity that may occur during studies, such as students dropping out of a programme if they fail intermediate tests or do not progress at the desired pace.

Figure D6.1. Limitations on the number of student places for first degree tertiary programme, by field of study and type of institution (2024)

OECD, partner and accession countries and other economies



Note: First degree tertiary programmes within countries and economies with open admissions systems can still be subject to limitations on the number of places available, either by field of education or institution. These limits may affect all fields of education or types of institutions, only some, or none at all. Similarly, for those with selective systems, limits may be set with reference to field of study and/or institutions. As such, a country or economy with a selective system may still report no limits (none) for one of these dimensions.
For data, see Table D6.1. For a link to download the data, see Tables and Notes section.

Other findings

- Regardless of whether their admission systems are selective or not, in most countries and economies there is only a limited number of places available to enter a given field of study, in both public and private institutions. Thus, even in non-selective systems, some applicants may not be accepted (although they may go on to be accepted for different fields).
- Students are required to apply directly to public tertiary institutions in almost half of countries and economies, while the remainder use a centralised system or a combination of both approaches. Centralised systems are less frequently used for admissions to private tertiary institutions.
- Selective institutions may take factors other than examination results into account when accepting applications, although to differing extents. The most commonly used criteria for admission to public tertiary institutions are academic performance, candidate interviews, the results of foreign language proficiency tests and high achievements in well-known external competitions.

Analysis

Organisation of admission systems to first degree tertiary programmes

Selective versus open admission systems

How students are admitted to first degree tertiary programmes reflects the way tertiary education is structured and organised within countries. Most education systems except for England and Scotland (United Kingdom) have public tertiary institutions, and most tertiary students are enrolled in public institutions on average across OECD countries (see Figure B1.4 in Education at a Glance 2022 (OECD, 2022[2])). Private tertiary institutions are almost as widespread, with only Denmark and Greece not having any government-dependent or independent private institutions offering first degree tertiary programmes. Government-dependent private institutions are part of the tertiary education landscape in less than half the countries and economies with available data (Table D6.1).

The use of open (or non-selective) admission system to tertiary programmes – where all applicants who achieve the minimum required educational attainment level are admitted – is common but not the main practice among both public and private tertiary institutions. Nearly half of countries and economies with available data for public institutions (15 out of 33) have at least some institutions with open admission systems (Figure D6.2). The use of open admissions systems in private tertiary institutions is similar: 7 out of 15 countries and economies with government-dependent private institutions and 10 out of 30 with independent private institutions report that at least some of these tertiary institutions use open admission systems (Table D6.1).

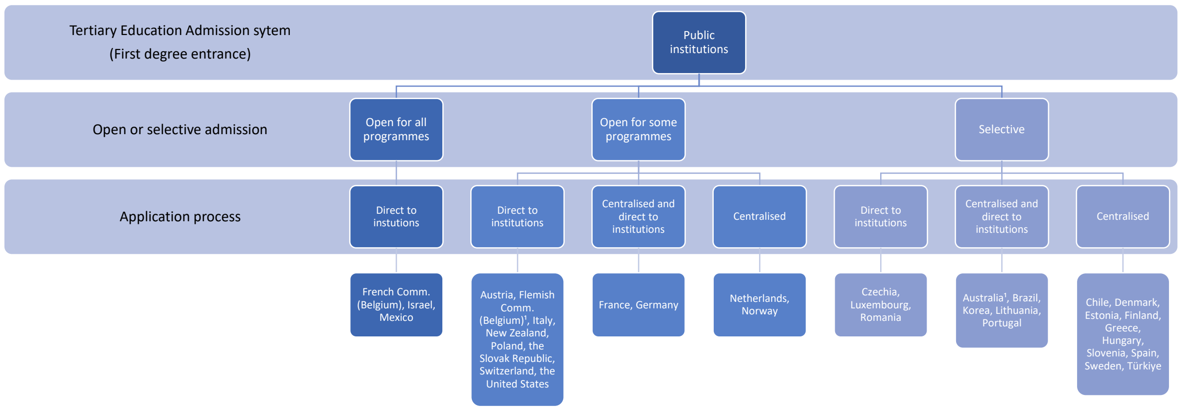
The use of selective admission systems – where applicants need to meet additional specific criteria and/or succeed in a competitive process to be admitted – is more widely implemented across countries and economies with available data, for admission into both public and private tertiary institutions (Figure D6.2 and Table D6.1).

Countries and economies can be divided into three groups according to how open or selective their admission systems are: those that use open admission for all first degree tertiary programmes, those that use selective admissions, and those that use a combination of open and selective admission. In this last group, the balance between open and selective admissions varies, with some countries close to open admission for all first degree programmes and others where admission is largely selective. Whatever the type of admission system used, there may be some limitations on students' entry into first degree tertiary programmes, either because the number of places in some or all programmes is limited, or because students are assessed or tested before they can enter these programmes (see the section on constraints below).

Centralised versus direct applications to tertiary institutions

Figure D6.2 outlines how different countries and economies combine the different types of admission systems (open or selective) and processes (centralised and/or direct) to first degree tertiary programmes in public institutions. In close to half of countries and economies with available information, students apply directly to the institutions, while in around one-third, they apply through a centralised system. The remaining countries and economies combine a centralised application system with direct applications to public tertiary institutions (Figure D6.2 and Figure D6.3).

Figure D6.2. Admission systems for first degree tertiary education in public institutions (2024)



Note: This figure only includes countries and other economies with available information on open or selective admission system.
1. Year of reference: 2023.
For data, see Table D6.1. For a link to download the data, see Tables and Notes section.

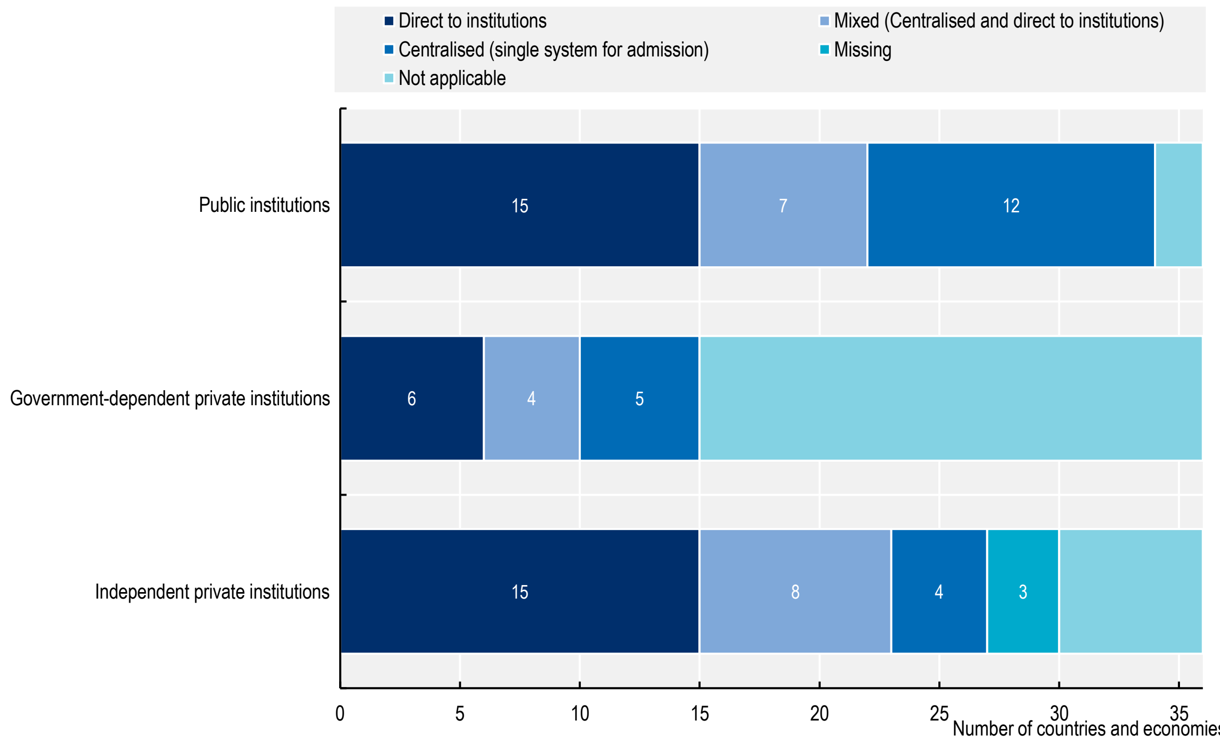
Where a centralised system is used (either as the only system or in combination with direct applications), applicants may be limited in the number of preferences they can specify, and in the number of offers they can receive following their applications. Applicants are limited to one preference when applying to public institutions in Brazil, three in Slovenia, and four in the Netherlands, but can specify ten or more in Chile, France, Germany, Norway, Sweden and Türkiye and multiple preferences within a limited number in Australia. In Greece there is no maximum number of applications. Regardless of the maximum number of applications, applicants receive just one offer in most countries with a centralised system. However, there is no limit on the number of offers made in Korea, which uses a combination of centralised and direct applications to public tertiary institutions (Table D6.1).

Applications to private tertiary institutions are less likely to be processed through a centralised application system. However, a central system is the only (or main) way to apply to private institutions in a few countries. This is the case in Chile, Finland and Slovenia for government-dependent private institutions, while in the Netherlands and Türkiye this process is used for independent private institutions. In Hungary and Scotland (United Kingdom), a centralised application process is used for both types of private institutions (Table D6.1).

Applications are made directly to private institutions in slightly less than half of the countries with government-dependent private institutions, and in most countries and economies with independent private institutions. However, one-quarter of countries with these types of tertiary institutions combine a centralised application system with direct applications (Table D6.1).

Figure D6.3. Application process for entry into first degree tertiary programmes (2024)

OECD, partner and accession countries and other economies



For data, see Table D6.1. For a link to download the data, see Tables and Notes section.

Constraints on students entering tertiary programmes

Limits on the number of places in particular fields of study or institutions

Open admission systems promote broad access to higher education but they may still impose some limits on the number of places available to students in first degree tertiary programmes. In most countries and economies with available data, the number of places available is only limited for some fields of study, for both public and private institutions (Figure D6.1). These limits may reflect increasing demand for specific sought-after fields of study. They may also be a way to align educational outcomes with labour-market needs to better prepare highly skilled graduates for the job opportunities available and prevent an oversupply of professionals in sectors such as dentistry, medicine and architecture. For example, in Italy, although open admission to first degree tertiary programmes is the general rule, exceptions exist to limit the number of student places (at national level) in medicine, dentistry, veterinary medicine, architecture, health professions and primary education science (from the academic year 2025/26 a new Ministerial Decree regulates access to medicine, dentistry and veterinary medicine for public Universities and overcomes the previous admission rules). Universities can also autonomously establish admission limits, for internal and structural reasons. Other areas also experience strong demand. In the Netherlands, for example, there are a fixed number of places in parts of study fields within social sciences, journalism and information; engineering, manufacturing and construction; and health and welfare (for other specific country examples see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)).

Limited enrolment by field of study is common in selective admission systems for both public and private institutions. Among the countries and economies using selective admission systems, all have some limitations on the number of student places. These limits are usually set for all fields of study rather than just some (Figure D6.1and Table D6.1).

Among countries and economies with open admission systems, nearly half of those with available data implement limits on the number of student places, which are applied to specific public and private educational institutions. These limits help to balance available resources and maintain high educational standards for the tertiary students admitted to those institutions. In contrast, among countries and economies with selective admission systems, almost all have limited enrolment for both public and private tertiary institutions and these limits generally apply to all institutions rather than just specific ones. In Austria and England (United Kingdom), all with selective systems, there are no limits to student places in independent private institutions (Figure D6.1 and Table D6.1).

Box D6.1. Alternative routes into first degree tertiary programmes

Candidates for tertiary education are usually young people who have completed or just graduated from upper secondary education, although some might take one or more gap years before applying to or entering tertiary education (see Chapter B3). All such graduates from upper secondary education who wish to enter tertiary education are expected to follow the same application and admission system. However, some countries and economies adapt their procedures for candidates in specific or exceptional circumstances. These circumstances might relate to individuals returning to education after a long time, or to candidates with special educational needs, refugee status or with exceptional talent.

Whatever the type of admission systems used (open or selective), most countries and economies with available data (26 out of 36) take into account at least one of these characteristics in their admission systems for public tertiary institutions. Individuals with special educational needs have specific admission systems in at least 18 countries and economies, but mostly for a restricted number of places. In the Flemish Community of Belgium, Brazil, Lithuania, Luxembourg and the Netherlands, there is no specific restriction on the number of student places for these applicants. Individuals with refugee status, exceptional talent or who have been out of education for a long period, are also offered specific admission criteria for public institutions in at least 14 countries and economies. In Australia, the Flemish Community of Belgium, Finland, Israel, Japan and New Zealand, there are alternative routes into first degree tertiary programmes for all these circumstances (Table D6.1).

Similar patterns are observed for admission to private tertiary institutions, but in fewer countries: 12 countries and economies recognise one of these exceptional circumstances in their admission system to government-dependent private institutions, and 17 do so for admission to independent private institutions, regardless of whether they have open or selective admissions systems to these types of tertiary institutions (Table D6.1).

Qualification and performance requirements to enter first degree tertiary programmes

In all countries and economies, access to first degree tertiary programmes (in public or private institutions) requires a minimum qualification level, which is usually an upper secondary qualification (ISCED 3) from a general or vocational programme (Table D6.5, available on line). Nevertheless, education systems may offer alternative routes to access first degree tertiary programmes which offer increased flexibility or inclusiveness for candidates with exceptional circumstances (such as the recognition of returning to education after a long time, special educational needs, refugee status or exceptional talent), described in Box D6.1.

Governments may also require upper secondary graduates to meet some minimum academic performance level to access a first degree tertiary programme, whether for a specific institution or field of study (Table D6.5, available on line). For example, in Chile (which has a selective admission system), the minimum academic performance requirement applies only to students entering programmes designed to prepare them for a career in teaching. Students need to have reached a certain level in the *Prueba de Acceso a la Educación Superior* (PAES) to access public or private tertiary institutions attached to the Centralised Access System to higher education, but the only requirement for students to enrol in independent private institutions is to have completed upper secondary education (see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)).

In about one-third of the countries and economies with available information (12 out of 35), the government sets minimum academic performance requirements for students graduating from general upper secondary programmes to enter some fields of study, while in 9 out of 35, there are minimum academic performance requirements to enter some tertiary institutions. In France, Greece, Israel, Lithuania, Norway and Portugal, these minimum academic performance requirements are applied to all fields of study and all tertiary institutions. For candidates graduating from vocational upper secondary programmes, 9 out of 31 countries and economies set minimum academic performance requirements to enter some fields of study, and 7 set them to enter tertiary institutions. In Greece, Israel, Lithuania, Norway, Portugal and Türkiye, these performance requirements relate to both field of studies and to tertiary institutions, and apply to candidates graduating from both general and vocational programmes (Table D6.5, available on line).

The use of examinations and tests to determine access to first degree programmes

Examinations and tests are common tools in both open and selective admission processes. They can be used either to assess whether students meet the minimum requirements to access first degree tertiary programmes, or to select students for these programmes. Admission systems use a range of types of examinations or tests: national or central examinations (standardised tests at the national or central level of the education system), first degree tertiary programme entrance examinations (standardised examinations at the national level specifically for use in the admission process, either as a minimum requirement or for selection, such as the *Ecole préparatoire* in France and the Scholastic Assessment Test in the United States), non-national/central standardised examinations and non-national/central non-standardised examinations. Countries and economies vary widely in the types of examinations they use and how they use them as criteria for access to tertiary education or for granting financial support such as scholarships.

The most widely used examinations for entry into first degree tertiary programmes (in both public and private institutions) are national/central examinations taken towards the end of upper secondary education, and entrance examinations administered by tertiary institutions. Non-national central standardised and non-standardised examinations are more often administered in countries with independent private institutions. While the non-national/central standardised examinations are administered to students and may replace or complement the entrance examinations at some higher educational institutions, the non-national non-standardised tests are administered to secondary school students or applicants to specific first degree tertiary programmes (Table D6.2).

Most countries and economies with available data on public tertiary institutions (32 out of 34) use at least one examination for students who wish to pursue tertiary studies. Eleven countries use a maximum of two types of examination and five countries (Brazil, Czechia, Finland, Germany and New Zealand) use three. Examinations are also administered to students applying to private institutions. In 13 out of 14 countries with available data, at least one type of examination is used for admissions to first degree tertiary programmes at government-dependent private institutions. For independent private institutions, 23 countries out of 30 with available data use at least one type of examination (Table D6.2).

Examination requirements to enter first degree tertiary programmes

Examinations for candidates to first degree tertiary education are used for different purposes in the admission process. In more than two-thirds of the countries and economies with available data, tests or examinations, whether national/central examinations, standardised tests at upper secondary level or tertiary programme entrance examinations are compulsory for entering at least some fields of study in public tertiary institutions (Table D6.2).

Admission systems for public tertiary institutions use national or central examinations in 18 countries and economies, but for different purposes. In 15 of them, candidates are required to pass the examination to meet the minimum eligibility criteria for applying to any first degree tertiary programme (Figure D6.4). The exceptions are Denmark, Estonia and New Zealand, where it is only compulsory for some candidates, but the results might be considered in the application process for other candidates either in all cases or at the discretion of tertiary institutions (Table D6.2).

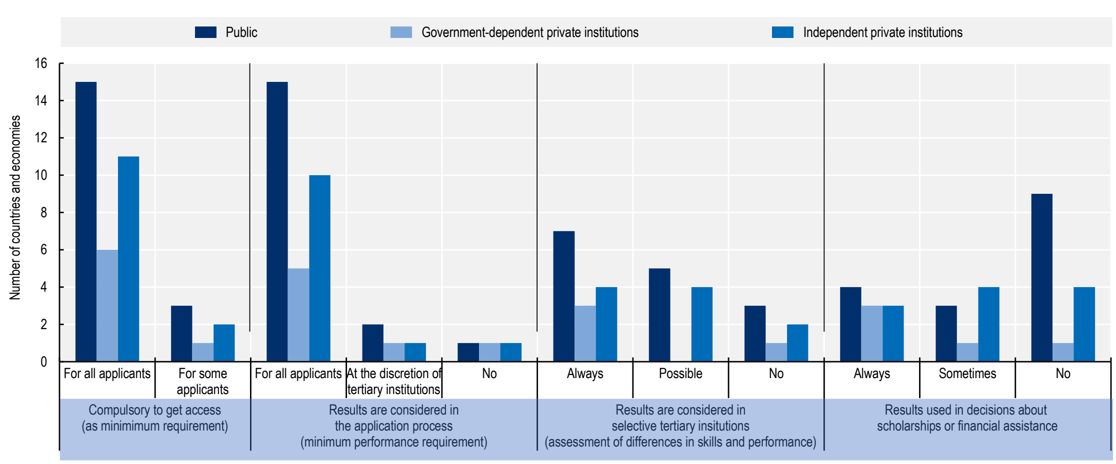
Entrance examinations are used in 13 countries and economies but are mostly not a compulsory requirement for access to first degree tertiary programmes except in Brazil and Spain. In both these countries all candidates' results are considered during the application process for first degree programmes, however in Brazil, there are three different types of examination offering admission. Each educational institution independently determines how to allocate the available places and the type of examination used to access those places. In some countries the results of these type of examinations are considered in the application process while in others they are used only at the discretion of tertiary institutions. Very few countries use the other two types of examinations for entry to public institutions (eight countries use non-national non-standardised examinations and six use non-national standardised examinations). Among countries that use only one type of examination, national or central examinations and entrance examinations are the most common (Table D6.2).

Access to private institutions follow a similar pattern, with the only difference being that fewer countries and economies use entrance examinations: eight report using entrance examinations for admission to independent private institutions, compared to 13 for admission to public institutions (Table D6.2).

Although all types of examinations play a central role in admissions to first degree tertiary programmes (in both public and private institutions), education systems may incorporate holistic criteria into their selection process. These might be merit-based criteria (including candidates' academic performance, candidates' interviews, applicant letters or recommendations) or based on candidates' personal backgrounds. This diversity of criteria allows applicants to be assessed more comprehensively (Box D6.2).

Figure D6.4. Purposes and uses of national/central examinations as admission criteria to tertiary institutions (2024)

National/central examinations refer to examinations for students at the end of upper secondary level, OECD partner and accession countries and other economies



Note: This figure only includes countries and other economies with available information. These did not provide answers for all categories. For data, see Table D6.2. For a link to download the data, see Tables and Notes section.

Use of the results of examinations for decision on admission

In five countries with selective admission systems to public tertiary institutions (Denmark, Greece, Hungary, Lithuania and Portugal) as well as in two with open admission systems where there are limited places in specific tertiary programmes in public institutions (Israel and New Zealand), the results of national examinations are always considered in admission decisions for selective institutions. In four further countries with a selective admission system to public tertiary institutions (Brazil, Czechia, Estonia and Romania) and in the Netherlands, which has an open system, examination results are considered at the discretion of individual tertiary institutions (Table D6.2).

Among countries using entrance examinations for selection process in the admission to first degree tertiary programmes in public institutions, only four always use the results for selective institutions (Chile, Israel, Lithuania and Spain), while in four others (Brazil, Luxembourg, Sweden, and the United States), the results are used at the discretion of tertiary institutions. The results of non-national/standardised or non-national/non-standardised examinations are mostly used at the discretion of public tertiary institutions (Table D6.2).

Use of results of examinations for decisions about scholarships or financial assistance

Examination results can play a role in decisions about the scholarships or financial aid that students receive, although this is not consistent across all countries and all types of examination. In most countries and economies, the results of national/central examinations are not considered in decisions to grant scholarships to applicants to either public or private tertiary institutions. The results are sometimes or always considered as part of the criteria for financial assistance in six countries which have both public and private institutions (Hungary, Israel, Italy, Lithuania, New Zealand and Slovenia), in Romania (only for public institutions) and in England (United Kingdom) and Türkiye for independent private institutions (Figure D6.4 and Table D6.2).

Similarly, in seven countries (Brazil, Chile, Israel, Korea, Lithuania, Luxembourg and the United States) the results of entrance examinations to first degree tertiary programmes are sometimes or always used to determine funding support for candidates to be enrolled in public tertiary institutions (or private institutions where these exist). In contrast, only in Australia, England (United Kingdom) and Germany the results from non-national/central standardised examinations may sometimes be used in decisions about scholarships or financial assistance to students, for public and/or private institutions (Table D6.2).

Many tertiary systems implement a range of measures to support candidates for first degree tertiary programmes, covering financial support for students, promoting different fields of study or under-represented groups, or other diverse campaigns to ensure more equitable access to higher education (Box D6.3).

Box D6.2. Admissions criteria beyond examinations

Admissions to tertiary education can be based on multiple criteria beyond the results of examinations. These criteria can be grouped into merit-based factors (academic performance, applicant letters, interviews, recommendations, the results of foreign language proficiency tests or exceptional performance in well-known external competitions), socio-economic background (ethnicity, family income or graduating from educational institutions in rural areas) and other personal characteristics (health requirements, criminal records, past work experience, past service or voluntary work). The use of these additional factors varies across education systems and reflects policy efforts to promote equity and inclusive access to tertiary education.

The most common type of criteria used to determine entry into public tertiary institutions are merit-based criteria. The most common of these is academic performance in secondary school, used by 24 out of 34 countries and economies, with both open or selective admission systems. Other commonly used merit-based criteria are candidate interviews, the results of foreign language proficiency tests and high achievements in well-known external competitions, used by at least 18 countries each (Table D6.3).

A significant number of countries and economies consider candidates' socio-economic and personal characteristics when determining access to first degree programmes in public institutions. For instance, 9 countries take family income into consideration and at least 14 countries use health requirement and past work experience (including voluntary work) when selecting candidates (Table D6.3).

Multiple criteria may be considered as part of the admission process. In Australia, Israel, Korea, the Netherlands, New Zealand and the United States, at least ten criteria (merit-based, socio-economic and personal characteristics) are taken into account when selecting candidates for tertiary public institutions. At the other end of the scale, Mexico, Norway and Spain only use one criterion – academic performance in secondary education – while the Flemish and French Communities of Belgium and Switzerland take none of these criteria into account (Table D6.3).

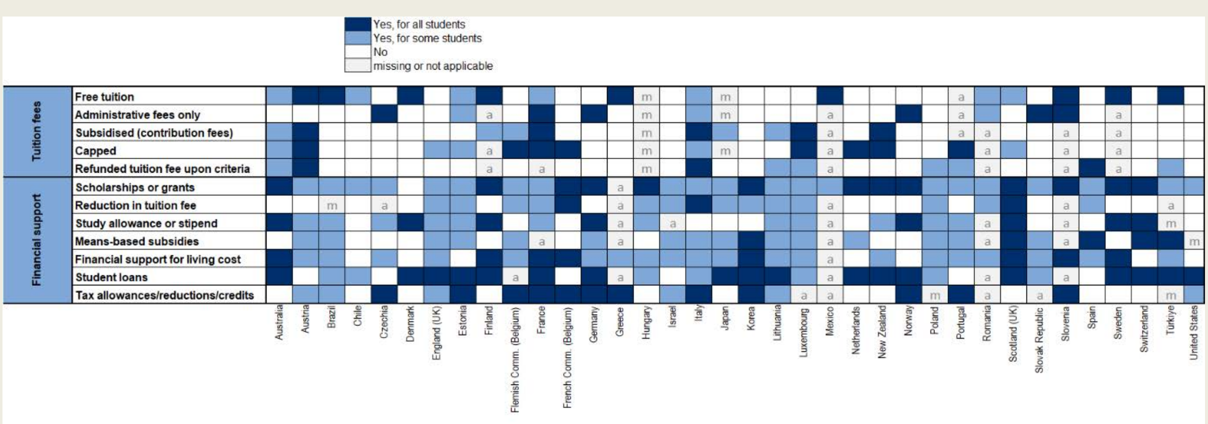
The criteria used in admission systems for government-dependent and independent private institutions do not differ much from those used in public institutions. Academic performance in secondary school, candidate interviews and the results of foreign language proficiency tests are also the most frequently used criteria in the admission process to first degree programmes in private tertiary institutions (Table D6.3).

Box D6.3. Measures to reduce barriers and support participation in first degree tertiary programmes

Governments use various initiatives to support or increase participation in first degree tertiary programmes, whether this involves reducing the financial barriers related to tuition fees, providing financial support to students, or through measures with other specific purposes. Figure D6.5 illustrates the use of a number of support measures designed to promote access to tertiary education among countries and economies with available data.

Financial support to students is a common practice, with all countries and economies offering at least one of the seven financial aid measures considered to some or all students. About half of the countries and economies with available data (17 out of 36) use at least five different measures to financially support students. Scholarships and/or grants are most widely employed, available to all students in more than one-third of countries and economies with available data, and to at least some students in 21 of these countries (Figure D6.5 and Table D6.7, available on line).

Figure D6.5. Measures to support and encourage students entering first degree tertiary education (2024)



For data, see Table D6.7, available online. For a link to download the data, see Tables and Notes section.

Student loans and other support for living costs are also available in about two-thirds of the countries and economies, while study allowances or stipends and means-based subsidies are available in more than half. Other measures such as reduced tuition fees and tax allowances/reductions/credits are less widely used. Except for Mexico, which only uses scholarships and other grants to households, all countries and economies implement multiple measures to support at least some students financially. For all the measures considered, countries vary as to whether they offer them to all students or just some of them (Figure D6.5 and Table D6.7 available on line).

Measures to reduce the financial barriers related to tuition fees are implemented by 31 out of 36 countries and economies. Free or capped tuition fees are the most common of these measures, implemented in about 40% or more countries and economies. In about one-quarter of these 31 countries and economies, these measures benefit all students, whereas in the other 15%, they are only available to some. Among the 31 countries and economies that reported having implemented any measures to mitigate tuition fees, two-thirds only implemented one (Figure D6.5 and Table D6.7, available on line).

Campaigns to boost participation are also common and are implemented in more than half of the 36 countries and economies with data. Of these, campaigns to promote of certain subjects or occupations are the most common, used by nearly three-quarters of them. Campaigns to attract students to tertiary education in general, improve gender equality and promote the participation of under-represented groups are used in at least 20 countries and economies. Most of them implement several or even all of the measures considered, but six of them only use one (Table D6.7, available on line).

Applicants and applications to first degree tertiary programmes

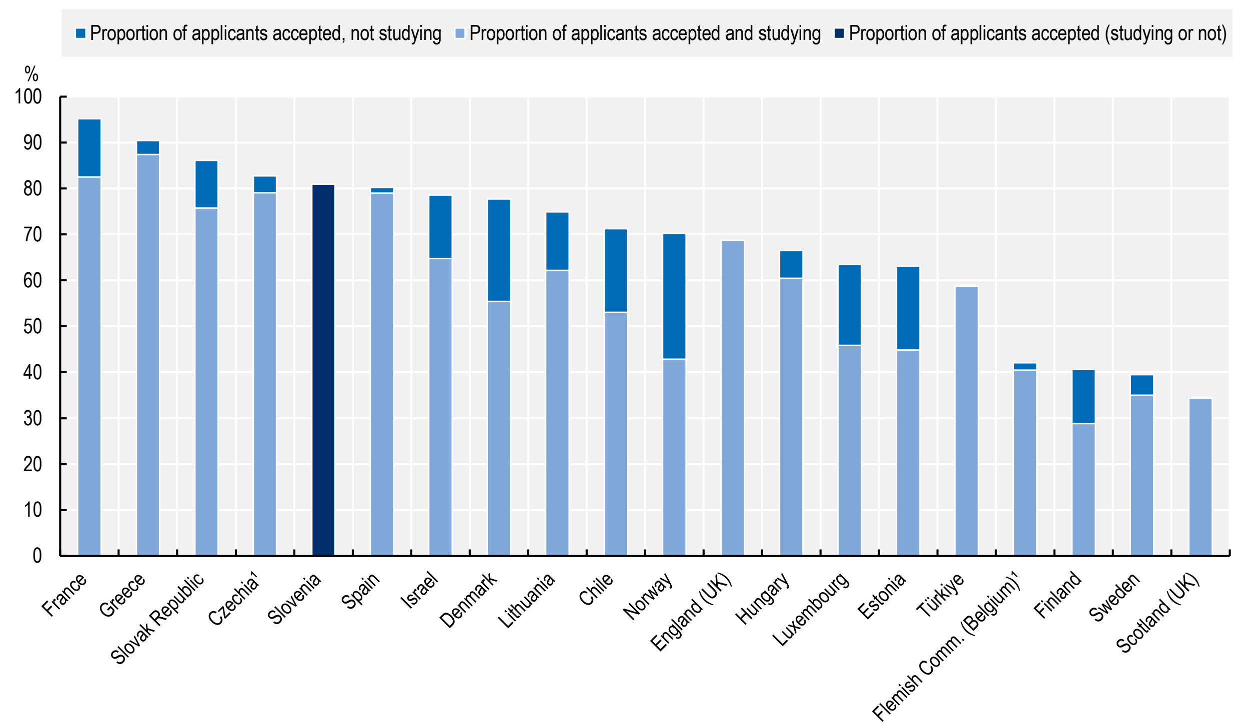
The total number of applicants to first degree of tertiary programmes depends on the size of the population in each country, as well as the number of people who would like to enrol at this level and meet the minimum requirements to apply. The total number of applications can also vary widely as the number made by a single applicant can vary across countries, depending on whether there is a centralised application system or if candidates need to apply separately to each tertiary institution (see above). Figures on the number of applicants and applications need to be interpreted with caution. For example, in the Flemish Community of Belgium, the numbers of applicants and applications are not available, as there is an open admission system for all programmes. Reporting the total number of applicants, excluding duplications, may be difficult in systems where candidates apply directly to tertiary institutions. In Greece for example, the total number of applicants does not exclude those who have already successfully applied to one institution but have sat the compulsory national examination again in order to apply for a place in a different one. Which institutions are considered may also introduce some biases in the data on the number of applicants. In Luxembourg for instance, the data are limited to public institutions. In Lithuania, the number of applicants is based on data from all public tertiary institutions but only those private ones that participate in the centralised admission system. For further details see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)).

Number of applicants by acceptance status

There are 20 countries and economies with available data on the number of applicants to first degree tertiary programmes (in public and private institutions combined). Of these 19 have data on the distribution of applicants by acceptance status (whether the applicant received at least one offer and whether or not they have taken up the offer and started studying). The proportion of accepted applicants (studying or not) varies widely across countries and economies, ranging from just 34% of applicants in Scotland (United Kingdom) to 95% in France. In three-quarters of countries and economies with available data, close to 60% (or more) of applicants are accepted, while in the remaining quarter, less than half (42% or less) are, although those who are not accepted may apply and be accepted in later years. The breakdown by acceptance status (whether studying or not) is not available in Slovenia, a country with a high proportion of accepted applicants (8 out of 10 applicants are accepted) despite a selective admission system (Figure D6.6).

The share of accepted applicants to first degree tertiary programmes who are studying exceeds 75% in Czechia, France, Greece, the Slovak Republic and Spain. Despite having similarly high proportions of accepted applicants, these countries' admission systems differ widely. France has an open admission system with selection limited to some fields of study or institutions (among public institutions, which account for most of the students). The Slovak Republic also has an open admission system, but without any limited places for either fields of study or particular institutions. Czechia, Greece and Spain operate selective admission systems with limitations on the number of places available in different institutions or fields of study. At the other end of the scale, 35% (or less) of applicants are accepted and studying in Finland, Scotland (United Kingdom) and Sweden, all of which have selective admission systems with limited numbers of student places (Figure D6.6 and Table D6.4).

Figure D6.6. Share of applicants to first degree tertiary education who are accepted (2024)



1. Year of reference: 2023.
For data, see Table D6.4. For a link to download the data, see Tables and Notes section.

The share of applicants who are accepted but not studying ranges from 1% in Spain to 27% in Norway. In most countries accepted applicants are significantly more likely to be studying than not, with the difference between the two groups exceeding 15 percentage points (Figure D6.6 and Table D6.4).

In all countries and economies with available data on applicants by gender, there are more female applicants than male applicants. The share of female applicants varies from 51% (in Luxembourg) to 71% (in the Flemish Community of Belgium). The highest shares of female applicants are in Australia, Estonia, the Flemish Community of Belgium, Lithuania and Sweden, where at least six out of ten applicants are women. The proportion of male and female applicants is nearly equal in a few countries (Finland, France and Luxembourg). Among the rest, most applicants are women (at least 55%), and the gap between female and male applicants is not more than 17 percentage points (Table D6.4). As women comprised 56% of first-time entrants into tertiary education across OECD countries in 2022 and constitute a majority of new entrants in every OECD country [see Chapter B4 in (OECD, 2024[1])], the proportion of applicants who are accepted and studying is similar for men and women.

Number of applications by their results

The proportion of accepted applications (i.e. applications resulting in an offer for a student place in the chosen field of study) also varies widely, from 8% in Sweden to around 80% in Slovenia. In slightly less than half of countries and economies with available data, one in two applications are accepted. The lowest proportions of accepted applications are observed in Chile (9%), Hungary (22%) and the Nordic countries of Denmark (28%), Norway (17%) and Sweden (8%). In these three Nordic countries, this results from the fact that applicants can only receive one offer of admission, regardless of the number of applications. Most of these have a selective admission system limiting places for at least some fields of study. Norway is the only country in this group with an open admission system, but it limits the number of students places in all fields of study and all tertiary institutions. Conversely, in England (United Kingdom), Israel, Luxembourg, the Slovak Republic and Slovenia, at least six out of ten applications are accepted. However, no patterns are apparent for the admission systems or limits on places within institutions or fields of study among these countries and economies. Nevertheless, in some countries applicants can submit a large number of applications, but can only be accepted to a limited number of these applications, which can explain some of the differences between countries (Table D6.4).

In slightly over half of the countries and economies with available data on the distribution of applications by field of study, health and welfare receives the largest proportions of applications. In the Flemish Community of Belgium this field (which combines applicants for medicine and dentistry) receives nearly all applications, accounting for at least 9 out of 10 applications. In the majority of countries and economies, at least one in five applications are directed to this field. Business, administration and law is the broad field of study receiving the second largest share of applications, accounting for at least one in ten applications across all countries (Table D6.4).

Definitions

The **application process** refers to the process by which applicants express their interest in enrolling in a tertiary programme through the submission of applications.

An **applicant** is individual who makes a formal application to enrol in at least one first degree tertiary programme.

An **application** is a form or collection of forms that an applicant uses to apply for enrolment in a specific tertiary programme.

A **standardised examination or test** refers to a test that is administered and scored under uniform conditions across different schools so that students' scores are directly comparable. In some cases, it also refers to multiple choice or fixed answer questions as this makes it easy to score the test uniformly. However, with the use of rubrics and the calibration of test examiners (who manually score open-ended responses), standardised tests can go beyond multiple choice and fixed answers.

National/central examinations are standardised tests that have a formal consequence for students, such as their eligibility to progress to a higher level of education or to complete an officially recognised degree. They assess a major portion of what students are expected to know or be able to do in a given subject. Examinations differ from assessments in terms of their purpose. National assessments are mandatory but, unlike examinations, they do not have an effect on students' progression or certification.

Other (non-national/central) standardised examinations are standardised tests that are administered and scored under uniform conditions across different schools at the state/territorial/provincial/regional or local level so that student scores are directly comparable.

Entrance examinations are examinations not administered by upper secondary schools that are typically used to determine, or help to determine, access to tertiary programmes. These examinations can be devised and/or graded at the institutional level (i.e. by individual tertiary institutions or a consortium of tertiary institutions), or by private companies.

First degree tertiary programmes refer to first degree bachelor's programmes or applied higher education programmes and first degree master's programmes as defined in ISCED 2011.

Open admission: An open or unselective admission system (as opposed to a **selective system**) to tertiary programmes refers to a system in which all applicants with the required minimum attainment level can enrol in the programme, without the need to meet other criteria.

A **selective system** to tertiary programmes refers to a system in which all applicants are not guaranteed a place in a tertiary programme. In a selective system, a selection process may take place in which tertiary institutions select applicants based on certain set of criteria. In a selective system, there are a fixed, limited number of student places available (i.e. *numerus clausus*).

Public tertiary institution: An institution is classified as public if it is: 1) controlled and managed directly by a public education authority or agency of the country where it is located; or 2) controlled and managed by a government agency directly or by a governing body (council, committee etc.), most of whose members are either appointed by a public authority of the country where it is located or elected by public franchise.

A **government-dependent private tertiary institution** is one that either receives at least 50% of its core funding from government agencies or one whose teaching personnel are paid by a government agency – either directly or through government

An **independent private tertiary institution** is one that receives less than 50% of its core funding from government agencies and whose teaching personnel are not paid by a government agency.

Methodology

This chapter is based on a survey on application and admission to first degree tertiary programmes that captured qualitative information on application and admission systems to first degree tertiary programmes and the number of applicants and applications to these programmes. Thirty-six OECD and partner countries and economies contributed to this survey (Australia, Austria, Brazil, Chile, Czechia, Denmark, England [United Kingdom], Estonia, Finland, France, the Flemish and French Communities of Belgium, Germany, Greece, Hungary, Israel, Italy, Japan, Korea, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Scotland [United Kingdom], the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United States).

For more information please see the *OECD Handbook for Internationally Comparable Education Statistics* (OECD, 2018[3]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* ((https://doi.org/10.1787/fcfaf2d1-en).

Sources

Data presented in this chapter are from the 2024 OECD-NESLI survey on application and admission to first degree tertiary programmes data collection and refer to the academic year 2023/24 (or the academic year 2024) for both qualitative information on admission systems and quantitative data on the number of applicants and applications.

References

OECD (2024), *Education at a Glance 2024: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/c00cad36-en. [1]

OECD (2022), *Education at a Glance 2022: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/3197152b-en. [2]

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264304444-en. [3]

Tables and Notes

Chapter D6 Tables

Table D6.1	Organisation of the admission system and application process to first degree tertiary programmes (2024)
Table D6.2	Type of examinations used to determine entry/admission into first degree tertiary programmes (2024)
Table D6.3	Additional criteria used for admission to first degree tertiary programmes (2024)
Table D6.4	Distribution of applicants and applications to first degree tertiary programmes (2024)
WEB Table D6.5	Responsible authority for admission criteria and minimum eligibility requirements for first degree tertiary programmes entry (2024)
WEB Table D6.6	Characteristics of examinations to determine entry/admission into first degree tertiary programmes (2024)
WEB Table D6.7	Government measures to support/increase participation in first degree tertiary programmes (2024)

StatLink https://stat.link/ralvtj

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D6.1. Organisation of the admission system and application process to first degree tertiary programmes (2024)

Note: Columns showing the authority responsible for setting limitations (Columns 3 and 5), the alternative routes available (Columns 12 to 15), information related to government-dependent private institutions (Columns 16 to 30) and information related to independent private institutions (Columns 31 to 45) are available for consultation on line.

1. Year of reference: 2023.

Table D6.2. Type of examinations used to determine entry/admission into first degree tertiary programmes (2024)

Note: Columns showing whether results are used in decisions about scholarships or financial assistance (Columns 5, 9, 13 and 17), information related to government-dependent private institutions (Columns 18 to 34) and information related to independent private institutions (Columns 35 to 51) are available for consultation on line. When referring to the results considered in the application process, "Only at instit. discr" means that these results may be considered at the discretion of individual tertiary educational institutions. When referrring to the resuls considered in the selection process (for selective systems), "Only at instit. discr" means that there is a possibility these are taken into account by individual selective tertiary educational institutions.

1. Year of reference: 2023.

2. There are two different "first degree tertiary programme entrance examinations", Further information is available in Table D6.6.

Table D6.3. Additional criteria used for admission to first degree tertiary programmes (2024)

Note: Columns showing information on other merit-based criteria, other socio-economic circumstances of applicants, other characteristics of applicant taken into consideration for admission to students places in first degree tertiary programmes in public institutions (Columns 7, 11 and 16), information related to government-dependent private institutions (Columns 17 to 32) and information related to independent private institutions (Columns 33 to 48) as well as rows showing the data for graduates from vocational upper secondary programmes are available for consultation on line.

1. Year of reference: 2023.

Table D6.4. Distribution of applicants and applications to first degree tertiary programmes (2024)

Note: Columns showing applicants by gender (Columns 4 and 5) are available for consultation on line.

1. Year of reference: 2023.
2. The distribution of applicants by gender does not add up to 100% as a small proportion of applicants cannot be classified by gender.
3. The distribution of applicants by gender includes those who have withdrawn their applications (they are excluded from the distribution of applicants by their acceptance status).
4. The distribution of applications by field of study does not add up to 100% as some applications cannot be classified by field of study.
5. The field of information and communication technologies is included in all other fields of study.
6. The distributions of applicants and applications by acceptance status do not add up to 100% as some applications or applicants cannot be classified by acceptance status.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table D6.1. Organisation of the admission system and application process for first degree tertiary programmes (2024)

	Public institutions				
	Organisation of the admission system				
		Fixed or limited number of student places (selective institutions) Existence of limitations on number of student places			
	Existence of open admissions	By field of study	By tertiary institution	Model used to distribute student places	Model used to fund degree programmes
OECD countries	(1)	(2)	(4)	(6)	(7)
Australia[1]	No	No, for some	Yes, for all	Mixed model	Mixed model
Austria	Yes, some progr.	No, for some	No	Central allocation	Central allocation
Canada	m	m	m	m	m
Chile	No	Yes, for all	Yes, for all	Market distribution	Mixed model
Colombia	m	m	m	m	m
Costa Rica	m	m	m	m	m
Czechia	No	Yes, for all	Yes, for all	Other	Other
Denmark	No	No, for some	No	Central allocation	Central allocation
Estonia	No	Other	Other	Mixed model	Mixed model
Finland	No	Yes, for all	Yes, for all	Other	Central allocation
France	Yes, some progr.	No, for some	No, for some	Central allocation	Mixed model
Germany	Yes, some progr.	No, for some	No	Central allocation	Central allocation
Greece	No	Yes, for all	Yes, for all	Central allocation	Central allocation
Hungary	No	Yes, for all	No, for some	Central allocation	Mixed model
Iceland	m	m	m	m	m
Ireland	m	m	m	m	m
Israel	Yes, all progr.	No, for some	Yes, for all	Central allocation	Central allocation
Italy	Yes, some progr.	No, for some	No	Central allocation	Mixed model
Japan	m	Yes, for all	Yes, for all	Other	Mixed model
Korea	No	No, for some	Yes, for all	Mixed model	Mixed model
Latvia	m	m	m	m	m
Lithuania	No	Yes, for all	Yes, for all	Mixed model	Mixed model
Luxembourg	No	Yes, for all	a	Market distribution	Mixed model
Mexico	Yes, all progr.	Yes, for all	Yes, for all	Market distribution	Market distribution
Netherlands	Yes, some progr.	No	No	Other	Central allocation
New Zealand	Yes, some progr.	No, for some	Other	Mixed model	Mixed model
Norway	Yes, some progr.	Yes, for all	Yes, for all	Mixed model	Central allocation
Poland	Yes, some progr.	Other	No, for some	Other	Other
Portugal	No	Yes, for all	Yes, for all	Central allocation	Mixed model
Slovak Republic	Yes, some progr.	No	a	Mixed model	Mixed model
Slovenia	No	Yes, for all	Yes, for all	Central allocation	Central allocation
Spain	No	Yes, for all	Yes, for all	m	Central allocation
Sweden	No	Yes, for all	Yes, for all	Mixed model	Central allocation
Switzerland	Yes, some progr.	No, for some	No	Market distribution	Central allocation
Türkiye	No	Yes, for all	Yes, for all	Central allocation	Central allocation
United States	Yes, some progr.	No, for some	No, for some	Market distribution	Mixed model
Other economies					
Flemish Comm. (Belgium)[1]	Yes, some progr.	No, for some	No	Other	Mixed model
French Comm. (Belgium)	Yes, all progr.	No, for some	No	a	Mixed model
England (UK)	a	a	a	a	a
Scotland (UK)[1]	a	a	a	a	a
Partner and/or accession countries					
Argentina	m	m	m	m	m
Brazil	No	Yes, for all	Yes, for all	m	Central allocation
Bulgaria	m	m	m	m	m
China	m	m	m	m	m
Croatia	m	m	m	m	m
India	m	m	m	m	m
Indonesia	m	m	m	m	m
Peru	m	m	m	m	m
Romania	No	Yes, for all	Yes, for all	Mixed model	Central allocation
Saudi Arabia	m	m	m	m	m
South Africa	m	m	m	m	m

	Public institutions			
	Application process			Alternative pathways to access tertiary education
		In the case of centralised systems		Existence (i.e. for applicants who are returning to education, with special needs, refugee status and/or exceptional talent)
	Type of admission/ application system	Maximum number of preferences an applicant can specify	Maximum number of offers an applicant can receive	
OECD countries	(8)	(9)	(10)	(11)
Australia[1]	Centralised and direct to institutions	a	a	yes
Austria	Direct to institutions	a	a	yes
Canada	m	m	m	m
Chile	Centralised	20	a	yes
Colombia	m	m	m	m
Costa Rica	m	m	m	m
Czechia	Direct to institutions	a	a	yes
Denmarkw	Centralised	8	1	No
Estonia	Centralised	Other	m	yes
Finland	Centralised	6	6	yes
France	Centralised and direct to institutions	10	10	yes
Germany	Centralised and direct to institutions	12	1	yes
Greece	Centralised	No limit	a	yes
Hungary	Centralised	6	1	a
Iceland	m	m	m	m
Ireland	m	m	m	m
Israel	Direct to institutions	a	a	yes
Italy	Direct to institutions	a	a	No
Japan	Direct to institutions	a	a	yes
Korea	Centralised and direct to institutions	9	No limit	yes
Latvia	m	m	m	m
Lithuania	Centralised and direct to institutions	9	1	yes
Luxembourg	Direct to institutions	a	a	yes
Mexico	Direct to institutions	a	a	No
Netherlands	Centralised	4	4	yes
New Zealand	Direct to institutions	a	a	yes
Norway	Centralised	10	1	yes
Poland	Direct to institutions	a	a	No
Portugal	Centralised and direct to institutions	6	1	yes
Slovak Republic	Direct to institutions	a	a	No
Slovenia	Centralised	3	1	yes
Spain	Centralised	Other	1	yes
Sweden	Centralised	12	Other	yes
Switzerland	Direct to institutions	a	a	No
Türkiye	Centralised	24	a	yes
United States	Direct to institutions	a	a	m
Other economies				
Flemish Comm. (Belgium)[1]	Direct to institutions	a	a	yes
French Comm. (Belgium)	Direct to institutions	a	a	yes
England (UK)	a	a	a	a
Scotland (UK)[1]	a	a	a	a
Partner and/or accession countries				
Argentina	m	m	m	m
Brazil	Centralised and direct to institutions	1	1	yes
Bulgaria	m	m	m	m
China	m	m	m	m
Croatia	m	m	m	m
India	m	m	m	m
Indonesia	m	m	m	m
Peru	m	m	m	m
Romania	Direct to institutions	a	a	yes
Saudi Arabia	m	m	m	m
South Africa	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D6.2. Type of examinations used to determine admission to first degree tertiary programmes (2024)

	Public institutions												
		National/central examination			First degree tertiary programme entrance examinations			Non-national/central standardised examinations			Non-national/central non-standardised examinations		
	Maximum number of types of examinations used	Compulsory requirement for access	Results considered in the application process (minimum performance requirements)	Results considered in the selection process (for selective institutions)	Compulsory requirement for access	Results considered in the application process (minimum performance requirements)	Results considered in the selection process (for selective institutions)	Compulsory requirement for access	Results considered in the application process (minimum performance requirements)	Results considered in the selection process (for selective institutions)	Compulsory requirement for access	Results considered in the application process (minimum performance requirements)	Results considered in the selection process (for selective institutions)
OECD countries	(1)	(2)	(3)	(4)	(6)	(7)	(8)	(10)	(11)	(12)	(14)	(15)	(16)
Australia[1]	1	a	a	a	a	a	a	No	Only for some	Yes, always	a	a	a
Austria	2	Yes	No	No	a	a	a	a	a	a	No	No	Yes, always
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	1	a	a	a	No	Only for some	Yes, always	a	a	a	a	a	a
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia	3	Yes	Yes, for all	Only at instit. discr.	a	a	a	No	No	Only at instit. discr.	No	No	Only at instit. discr.
Denmark	1	No	Yes, for all	Yes, always	a	a	a	a	a	a	a	a	a
Estonia	2	No	Only at instit. discr.	Only at instit. discr.	a	a	a	a	a	a	No	Only at instit. discr.	Only at instit. discr.
Finland	3	Yes	Yes, for all	m	a	a	a	Yes	Yes, for all	m	a	a	a
France	1	Yes	Yes, for all	No	a	a	a	a	a	a	a	a	a
Germany	3	a	a	a	a	a	a	Yes	Yes, for all	Yes, always	a	a	a
Greece	1	Yes	Yes, for all	Yes, always	a	a	a	a	a	a	a	a	a
Hungary	1	Yes	Yes, for all	Yes, always	a	a	a	a	a	a	a	a	a
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	2	Yes	Yes, for all	Yes, always	No	Yes, for all	Yes, always	a	a	a	a	a	a
Italy	2	Yes	Yes, for all	No	No	Only for some	No	a	a	a	a	a	a
Japan	2	a	a	a	No	m	m	a	a	a	No	m	m
Korea	1	a	a	a	No	Only at instit. discr.	a	a	a	a	a	a	a
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	2	Yes	Yes, for all	Yes, always	No	Only for some	Yes, always	a	a	a	a	a	a
Luxembourg	2	a	a	a	No	a	Only at instit. discr.	a	a	a	a	a	a
Mexico	m	a	a	a	a	a	a	a	a	a	a	a	a
Netherlands	1	Yes	Yes, for all	Only at instit. discr.	a	a	a	a	a	a	a	a	a
New Zealand	3	No	Only at instit. discr.	Yes, always	a	a	a	No	Only at instit. discr.	Only at instit. discr.	No	Only at instit. discr.	Only at instit. discr.
Norway	1	a	a	a	a	a	a	a	a	a	No	Only for some	Yes, always
Poland	a	a	a	a	a	a	a	a	a	a	a	a	a
Portugal	1	Yes	Yes, for all	Yes, always	a	a	a	a	a	a	a	a	a
Slovak Republic	1	a	a	a	a	a	a	a	a	a	No	Only for some	Only at instit. discr.
Slovenia	2	Yes	Yes, for all	a	a	a	a	a	a	a	a	a	a
Spain	1	a	a	a	Yes	Yes, for all	Yes, always	a	a	a	a	a	a
Sweden	1	a	a	a	No	No	Only at instit. discr.	a	a	a	a	a	a
Switzerland	1	a	a	a	a	a	a	Yes	Yes, for all	No	a	a	a
Türkiye	2	Yes	Yes, for all	a	a	a	a	a	a	a	Yes	Yes, for all	a
United States	2	a	a	a	No	Only at instit. discr.	Only at instit. discr.	a	a	a	a	a	a
Other economies													
Flemish Comm. (Belgium)[1]	2	a	a	a	No	Yes, for all	a	a	a	a	a	a	a
French Comm. (Belgium)	1	a	a	a	No	No	No	a	a	a	a	a	a
England (UK)	a	a	a	a	a	a	a	a	a	a	a	a	a
Scotland (UK)[1]	a	a	a	a	a	a	a	a	a	a	a	a	a
Partner and/or accession countries													
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil[2]	3	Yes	Yes, for all	Only at instit. discr.	Yes	Yes, for all	Only at instit. discr.	a	a	a	a	a	a
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	1	Yes	Yes, for all	Only at instit. discr.	a	a	a	a	a	a	a	a	a
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D6.3. Additional criteria used for admission to first degree tertiary programmes (2024)

	Public institutions (graduates from general upper secondary programmes)					
	Merit-based criteria					
	Academic performance during secondary (or post-secondary) education	Applicant letter or written rationale to justify admission	Interviews	Recommendations	Results of foreign language proficiency tests (e.g. TOEFL, IELTS)	High achievements in distinguished external competitions
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)
Australia[1]	Yes, for some	Yes, for some	Yes, for some	Yes, for some	a	a
Austria	No	Yes, for some	No	No	Yes, for some	No
Canada	m	m	m	m	m	m
Chile	Yes, for all	No	No	No	No	Yes, for some
Colombia	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m
Czechia	Yes, for some	Yes, for some	Yes, for some	No	Yes, for some	Yes, for some
Denmark	Yes, for all	Yes, for all	Yes, for all	Yes, for all	No	No
Estonia	Yes, for all	Yes, for some	Yes, for some	No	Yes, for some	Yes, for some
Finland	No	No	Yes, for some	No	Yes, for some	m
France	Yes, for all	Yes, for all	No	No	No	No
Germany	Yes, for all	Yes, for some	Yes, for some	No	Yes, for some	Yes, for some
Greece	No	No	No	No	No	Yes, for all
Hungary	Yes, for all	No	Yes, for some	No	Yes, for some	Yes, for some
Iceland	m	m	m	m	m	m
Ireland	m	m	m	m	m	m
Israel	No	Yes, for some	Yes, for some	Yes, for some	Yes, for all	No
Italy	No	a	a	a	No	No
Japan	Yes, for all	Yes, for all	Yes, for all	Yes, for all	Yes, for some	Yes, for some
Korea	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Latvia	m	m	m	m	m	m
Lithuania	Yes, for all	No	Yes, for some	No	Yes, for some	Yes, for all
Luxembourg	Yes, for all	Yes, for all	Yes, for some	No	Yes, for all	Yes, for all
Mexico	Yes, for all	a	a	a	a	a
Netherlands	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
New Zealand	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Norway	Yes, for all	m	m	m	m	m
Poland	No	No	No	No	No	Yes, for some
Portugal	Yes, for all	No	Yes, for all	No	No	No
Slovak Republic	Yes, for all	No	No	No	Yes, for some	Yes, for some
Slovenia	Yes, for all	No	No	No	Yes, for some	No
Spain	Yes, for all	No	No	No	No	No
Sweden	Yes, for all	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Switzerland	No	No	No	No	No	No
Türkiye	Yes, for all	No	No	No	No	Yes, for all
United States	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Other economies						
Flemish Comm. (Belgium)[1]	No	No	No	No	No	No
French Comm. (Belgium)	No	No	No	No	No	No
England (UK)	a	a	a	a	a	a
Scotland (UK)[1]	a	a	a	a	a	a
Partner and/or accession countries						
Argentina	m	m	m	m	m	m
Brazil	No	No	No	No	No	No
Bulgaria	m	m	m	m	m	m
China	m	m	m	m	m	m
Croatia	m	m	m	m	m	m
India	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m
Peru	m	m	m	m	m	m
Romania	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for all
Saudi Arabia	m	m	m	m	m	m
South Africa	m	m	m	m	m	m

	Public institutions (graduates from general upper secondary programmes)						
	Socio-economic circumstances of applicant			Characteristics of applicant			
	Ethnicity of applicant	Family income of applicant (or proof of sufficient funds)	Applicants graduating from educational institutions in rural areas	Health requirements	Criminal records	Past work experience	Past service or volunteer work
OECD countries	(8)	(9)	(10)	(12)	(13)	(14)	(15)
Australia[1]	a	Yes, for some	Yes, for some	Yes, for all	Yes, for some	Yes, for some	Yes, for some
Austria	No	No	No	No	No	No	No
Canada	m	m	m	m	m	m	m
Chile	Yes, for some	No	No	No	No	No	No
Colombia	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m
Czechia	No	No	No	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Denmark	No	No	No	No	No	Yes, for all	Yes, for all
Estonia	No	No	No	Yes, for some	Yes, for some	No	Yes, for some
Finland	No	No	No	a	a	No	No
France	No	Yes, for some	No	No	No	No	No
Germany	No	No	No	No	No	Yes, for some	Yes, for some
Greece	No	No	No	Yes, for some	No	No	No
Hungary	No	Yes, for all	No	Yes, for some	No	Yes, for some	Yes, for some
Iceland	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m
Israel	Yes, for some	Yes, for some	Yes, for some	No	No	Yes, for some	Yes, for some
Italy	Yes, for some	Yes, for all	m	No	No	No	No
Japan	No	No	No	m	m	Yes, for all	Yes, for all
Korea	Yes, for some	Yes, for some	Yes, for some	Yes, for some	No	Yes, for some	Yes, for some
Latvia	m	m	m	m	m	m	m
Lithuania	No	No	No	Yes, for some	No	Yes, for all	Yes, for all
Luxembourg	No	No	No	No	No	No	No
Mexico	No	No	No	No	No	No	No
Netherlands	No	No	No	Yes, for some	Yes, for some	Yes, for some	Yes, for some
New Zealand	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Norway	No	No	No	No	No	No	No
Poland	No	No	No	Yes, for some	No	No	No
Portugal	No	No	No	Yes, for some	No	No	No
Slovak Republic	No	No	No	No	No	No	No
Slovenia	No	No	No	No	No	No	No
Spain	No	No	No	No	No	No	No
Sweden	No	No	No	No	No	Yes, for some	Yes, for some
Switzerland	No	No	No	No	No	No	No
Türkiye	No	No	No	Yes, for some	Yes, for all	No	No
United States	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some	Yes, for some
Other economies							
Flemish Comm. (Belgium)[1]	No	No	No	No	No	No	No
French Comm. (Belgium)	No	No	No	No	No	No	No
England (UK)	a	a	a	a	a	a	a
Scotland (UK)[1]	a	a	a	a	a	a	a
Partner and/or accession countries							
Argentina	m	m	m	m	m	m	m
Brazil	Yes, for some	Yes, for some	m	Yes, for some	No	No	No
Bulgaria	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m
Romania	No	No	No	No	No	No	No
Saudi Arabia	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above

Table D6.4. Distribution of applicants and applications to first degree tertiary programmes (2024)

In per cent

	Distribution of applicants to first degree tertiary programmes (including international students)			Distribution of applications to first degree tertiary programmes												
	Applicants by acceptance status			Applications by acceptance status		Applications by field of study										
	Applicants accepted and studying	Applicants accepted, not studying	Applicants rejected	Applications accepted	Applications rejected	Generic programmes and qualifications	Education	Arts and humanities	Social sciences, journalism and information	Business, administration and law	Natural sciences, mathematics and statistics	Information and communication technologies (ICT)	Engineering, manufacturing and construction	Agriculture, forestry, fisheries and veterinary	Health and welfare	Services
OECD countries	(1)	(2)	(3)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Australia[1, 2]	m	m	m	m	m	a	9	12	9	15	8	4	9	2	31	1
Austria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	53	18	29	9	91	0	6	3	12	14	3	3	13	4	41	1
Colombia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia[1]	79	4	17	57	43	a	17	10	8	17	5	5	8	3	21	4
Denmark[3]	55	22	22	28	72	a	3	10	13	23	5	5	12	1	26	1
Estonia	45	18	37	49	51	a	10	10	9	16	7	7	13	3	17	8
Finland[2]	29	12	59	m	m	a	3	7	5	26	2	12	14	2	24	5
France	83	13	5	37	63	m	m	m	m	m	m	m	m	m	m	m
Germany	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	87	3	10	m	m	m	m	m	m	m	m	m	m	m	m	m
Hungary	60	6	34	22	78	m	m	m	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	65	14	21	76	24	0	4	8	15	21	6	13	16	0	17	m
Italy	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Japan[4, 5]	m	m	m	m	m	a	4	15	10	26	4	x	20	3	11	1[d]
Korea[4]	m	m	m	m	m	a	4	17	7	11	7	7	20	2	19	6
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	62	13	25	45	55	a	7	8	12	24	4	7	13	3	19	4
Luxembourg	46	18	36	60	40	a	13	9	16	22	8	16	5	a	11	a
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Norway	43	27	30	17	83	a	9	7	15	18	4	7	9	1	25	5
Poland	m	m	m	36	64	m	m	m	m	m	m	m	m	m	m	m
Portugal	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovak Republic	76	10	14	65	35	a	12	7	15	15	6	7	9	2	21	5
Slovenia[6]	81[d]	x(1)	19	80	20	m	m	m	m	m	m	m	m	m	m	m
Spain	79	1	20	14	a	a	10	6	10	14	9	4	13	1	29	3
Sweden	35	4	61	8	92	a	9	6	16	18	3	7	17	1	23	1
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	59	m	m	m	m	10	7	6	9	25	4	1	16	3	19	2
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Other economies																
Flemish Comm. (Belgium)[1]	40	2	58	40	60	a	a	a	a	a	a	a	a	8	92	a
French Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
England (UK)	69	m	m	67	33	0	2	16	18	19	12	6	8	1	19	a
Scotland (UK)	34	a	66	56	44	0	7	16	11	13	12	7	8	1	23	1
OECD average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries																
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	1	14	3	7	27	1	8	8	4	25	3
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter D7. How much are academic staff in tertiary institutions paid?

Highlights

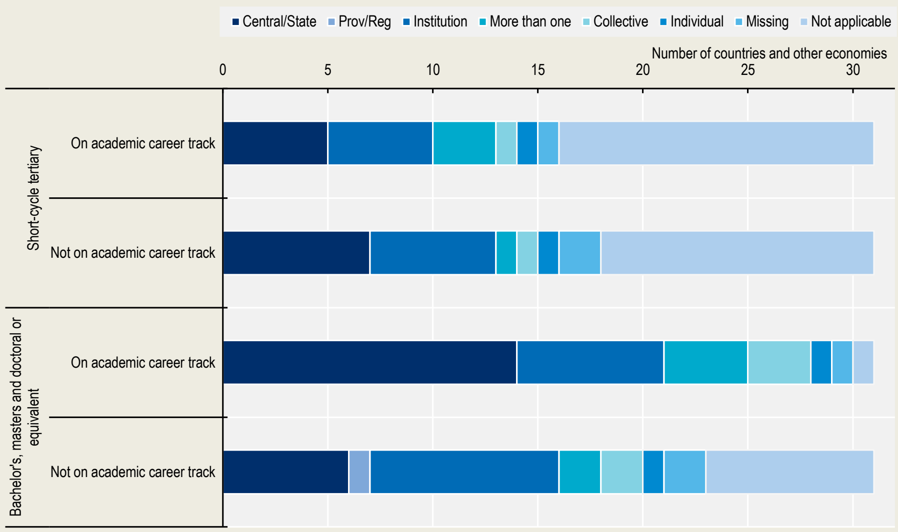
- Average actual salaries of all tertiary staff on academic career tracks are similar to the earnings of tertiary-educated workers, but differences vary by seniority. On average, the earnings of junior staff are 18% below those for tertiary educated workers, while those for senior staff are 50% above it.
- Among the 18 countries and economies with available information, the statutory salaries of tertiary academic staff vary widely within systems. On average, maximum salaries are more than two times higher than minimum salaries (USD 103 519 compared with USD 39 847).
- In most countries, salaries are decided by central authorities, which usually set statutory salaries, or by institutions themselves. The countries and economies where salary decisions are made by tertiary institutions or other local authorities tend not to have statutory salaries for academic staff.

Context

Over recent decades, enrolment in tertiary education programmes has risen substantially across OECD countries, driving increased investment in higher education systems. This expansion has placed growing demands on institutions to build and maintain infrastructure, enhance academic offerings and, most critically, attract and retain a highly qualified academic workforce. As highlighted in Chapters C1 and C5, these trends are reflected in rising expenditure on tertiary education, with staff salaries representing the largest single component of education expenditure.

In this context, the competitiveness of academic salaries plays a central role in ensuring that institutions can recruit and retain high-quality educators and researchers. Although salary levels are a key determinant in career decisions, they are only part of a broader equation. The appeal of an academic career also depends on factors such as research autonomy, recognition and collaboration opportunities, and the balance between teaching, research and administrative responsibilities. Nevertheless, as policy makers and the public increasingly scrutinise the sustainability of tertiary education systems, understanding salary structures and trends is essential to addressing long-term workforce planning and academic excellence.

Figure D7.1. Decision-making levels determining academic staff salaries, by tertiary education level and staff categories (2023)



Who determines salaries
Central/State = Central/state government or top-level authorities
Prov/Reg = Provincial/regional authorities or sub-regional/inter-municipal authorities
Local = Local authorities
Institutions = tertiary institutions
More than one = More than one authority level
Collective = Collective agreement
Individual = Individual negotiation
For data, see Table D7.1. For a link to download the data, see Tables and Notes section.

Other findings

- On average across OECD countries and economies, actual salaries range from USD 61 958 for junior staff, to USD 73 682 for intermediate staff and USD 108 255 for senior staff. Staff not on an academic career track tend to earn less. In six out of ten countries with data available, their salaries are lower than those of junior academic staff.
- Actual salaries are slightly higher for men than women on average across countries with available data. However, the gender gap among staff at the same seniority level is usually small and does not exceed 10%. For all tertiary academic staff combined, the difference in actual salaries between men and women is larger, suggesting that men tend to hold more senior positions and hence earn higher salaries.
- In contrast to teachers in primary and secondary levels, the compensation structure for academic staff incorporates additional allowances related to personal performance and academic output, since additional responsibilities for research and administration are more common.

Note

Statutory salaries are just one component of the total compensation of tertiary academic staff. Other benefits, such as regional allowances for teaching in remote areas, family allowances, reduced rates on public transport and tax allowances on the purchase of instructional materials may also form part of their total remuneration. In addition, there are large differences in taxation and social benefits systems across OECD countries. There can also be substantial variation in salary scales at subnational level in some countries, based on local factors such as the cost of living. This should be kept in mind when analysing salaries and making cross-country comparisons, along with potential comparability issues related to the data collected (*Education at a Glance 2025 Sources, Methodologies and Technical Notes* - (https://doi.org/10.1787/fcfaf2d1-en)) and the fact that the data collected only cover public institutions.

All figures expressed in USD are converted from national currencies based on exchange rates that are adjusted for differences in purchasing power across countries (see *Methodology* section).

Analysis

Salaries of tertiary academic staff can vary according to different factors, including their experience and their level of responsibilities. These elements also reflect the seniority of their position (Box D7.1). Their field of expertise and the type of tertiary institutions where they teach can also influence compensation; for example, prestigious tertiary institutions may offer higher pay. Performance and contributions to research and publications are also key for progression and promotion to higher grades or more senior positions and may further differentiate salaries. These factors distinguish academic teaching careers from those at lower levels of education, where salary levels mostly depend on how long they have been teaching.

As in primary and secondary levels of education (see Chapter D3), academic attainment can play a role in determining the level of salaries but tends to have less of an impact than at lower levels, as most academic staff in tertiary education have a doctorate or are enrolled in a doctoral programme.

This comparative analysis focuses on staff in public tertiary institutions whose main activity is teaching (by organising or conducting activities related to furthering students' knowledge). It excludes tertiary staff mostly involved in research activities and those working in tertiary private institutions.

Box D7.1. Categories of tertiary academic staff

Whereas base salaries of primary and secondary teachers in public institutions are mostly related to the number of years of experience of teachers and their qualification levels (see Chapter D3), the structures for determining the salaries of tertiary staff with some teaching responsibilities are markedly different across countries. As is the case for primary and secondary teachers, countries use national salary schedules as a basis for determining the salaries of tertiary staff with teaching (and research) activities but in many countries and economies, individual institutions also have the ability to modify these payment levels. The criteria used to set tertiary staff salaries include educational attainment and length of experience, but also academic rank, field(s) of instruction and research experience.

To ensure the comparability of information on salaries of tertiary staff, data on salaries have been collected based on an agreed international classification of tertiary staff involved in instruction activities. This classification takes into consideration differences in the types of positions or grades across countries (based on the educational attainment, main functions, status and career perspectives, and compensation) and also the availability of data in order to avoid having such narrow categories that information would only be available from a few countries.

This classification includes different categories of staff involved in instruction, primarily distinguishing between tertiary academic staff and teaching and research assistants. Within the academic staff category, junior, intermediate and senior staff are distinguished from employed doctoral candidates and from academic staff not on an academic career track:

- Junior: Entry grades/posts into which an individual would normally be recruited to begin their academic career. Staff allocated to this category must hold similar qualifications, pay range and level of responsibilities, although the nature of their responsibilities may differ. This excludes doctoral candidates. Examples are assistant professor (the United States), lecturer (the United States), *professeurs agrégés* (France), junior researcher and post-doctoral researcher.

- Intermediate: Staff pursuing an academic career working in positions not as senior as the top position but more senior than entry-level positions. Examples are associate professor (the United States), *maître de conférences* (France) and senior researcher.
- Senior: The highest grades/posts for academic staff pursuing an academic career in either instruction or research. Staff allocated to this category must hold similar qualifications, pay range and level of responsibilities, although the nature of their responsibilities may differ. It is possible to have one grade/post per career track if relevant (i.e. if the tracks are clearly separate). Examples are full professor (the United States), *professeur titulaire et corps assimilés* (France) and director of research.
- Employed doctoral candidates: Doctoral candidates employed full or part-time by their institution during their doctoral degree.
- Other academic staff not on academic track: Instructional and research personnel who are not considered to be on the academic career track. Examples are adjunct professors and fellows. This group excludes doctoral candidates and teaching and research assistants.

Information on the positions associated with the different categories of tertiary academic staff in each country is available in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Decision-making levels determining salaries

In public tertiary institutions providing bachelor's, master's and doctoral degrees or equivalent, the salaries of tertiary academic staff on academic career track are decided at the central or state level in about half the countries and economies with available data (14 out of 31) and at the level of the institutions in almost one-quarter (7 out of 31). Among the remaining countries, salaries are decided based on collective agreements or jointly by bodies at different decision-making levels. For example, In Korea the central level sets base wages for tertiary staff in public universities, but these universities have the freedom to implement additional wages. In Germany, around one-quarter of staff are civil servants whose salaries are determined at the level of Länder, while three-quarters of staff are public employees whose salaries are determined by collective agreements (Figure D7.1 and Table D7.1).

Two-thirds of these countries and economies (21 out of 31) also reported information on the level of the authorities determining the salaries of other academic staff not on academic career track (in most of the other countries, no staff were in this category). In most of these, the same level of authority determines salaries for all academic staff, whether they are on an academic track or not. However, in a few countries, a lower level of authority determines the salaries of other academic staff not on an academic career track. In France, Italy and Portugal, staff salaries are decided at the central level for academic staff on an academic career track, but by tertiary institutions for other academic staff. This usually results from the fact that these staff are hired on short-term contracts (Figure D7.1 and Table D7.1).

Fewer countries and economies (15 out of 31) also have information on the level of authorities that determine the salaries of staff in tertiary institutions providing short-cycle tertiary programmes. In these countries, decisions are most frequently made by central/state authorities or tertiary institutions, and these two levels of authorities make decisions on salaries in a similar number of countries for all types of staff, whether they are on academic track or not. There are also few differences in the authority levels taking decisions on salaries for tertiary institutions offering short-cycle programmes or bachelor, master's, and doctoral degrees or equivalent programmes. Where both types of institutions exist in a country, the decision levels tend to be the same. For example, salaries in Iceland are determined by collective agreement for all public tertiary institutions, whatever the type of programmes delivered in these institutions while in Japan salaries are always determined at the level of the tertiary institution (Figure D7.1 and Table D7.1).

Statutory salaries for tertiary academic staff

Existence of statutory salary scales

Among countries and economies with available information, 21 report that they have statutory salaries for academic staff in tertiary institutions providing bachelor's, master’s and doctoral or equivalent programmes and 11 report having statutory salaries for staff in institutions providing short-cycle tertiary programmes (for staff on academic career track and/or not on academic career track). As might be expected, the existence of salary scales for tertiary academic staff in public institutions is related to the level of authorities determining the salaries. All countries in which central authorities take decisions on the salaries of tertiary academic staff in tertiary institutions providing bachelor's, master’s and doctoral or equivalent programmes have statutory salaries for these staff. This is also the case for staff in tertiary institutions providing short-cycle tertiary programmes. Generally, in countries where statutory salaries are implemented in institutions providing bachelor's, master’s and doctoral or equivalent programmes, they are also implemented for institutions providing short-cycle tertiary programmes, since the authorities responsible for deciding salaries are the same for both (Table D7.1).

However, statutory salaries are also defined in some countries where decisions on salaries of tertiary academic staff are not solely made at the central level. In Finland, Iceland and the Netherlands, statutory salaries are decided by collective agreements. In Brazil, Germany and Spain statutory salaries are decided at multiple levels, due to their federal or decentralised systems.

Level of statutory salaries

Statutory salaries of tertiary academic staff vary widely across and within countries, when the range between minimum and maximum statutory salaries is considered. However, these differences should be interpreted with caution as very few staff might be on the minimum or maximum statutory salaries in some countries.

In tertiary institutions providing bachelor's, master’s and doctoral or equivalent programmes, statutory salaries of staff on academic career track (at all levels of seniority combined) range from a minimum of USD 39 847 to a maximum of USD 103 519 on average across the 18 countries and economies with available information. However, these average values hide much larger differences between the minimum and maximum salaries in some countries. Maximum salaries are 60% higher than minimum salaries in Slovenia (USD 53 623 compared with USD 85 853), but are around four times or more the minimum in Brazil (from USD 28 779 to USD 120 092) and Spain (from USD 37 336 to USD 146 898) (Table D7.2).

In these institutions, the differences between minimum and maximum statutory salaries are much smaller for staff who are not on academic career track in the few countries with available data. The maximum statutory salary is less than 45% higher than the minimum in four countries with available information (Greece, Hungary, Iceland and Romania) (Table D7.2).

In tertiary institutions providing short-cycle tertiary programmes, the range between minimum and maximum statutory salaries of staff on an academic career track are similar to those in institutions providing bachelor's, master’s and doctoral or equivalent programmes. Among the seven countries with available data, maximum statutory salaries are 35% higher than the minimum in Colombia (from USD 28 905 to USD 39 141) but over four times the minimum in Brazil (USD 28 779 to USD 120 092), where the range of statutory salaries is the same for both types of public tertiary institutions (Table D7.2).

Statutory salaries by seniority level

Minimum and maximum salaries, as well as the range between them, can also vary depending on the seniority of tertiary academic staff (on an academic career track). Minimum and maximum salaries differ between seniority levels in most countries with available information on the statutory salaries of staff on academic career track in tertiary institution providing bachelor's, master’s and doctoral or equivalent programmes.

In some countries, the minimum and maximum salaries increase with the level of seniority of staff, but there is no clear pattern for the variation in range between minimum and maximum salaries across seniority levels. For example, in Hungary the difference between minimum and maximum salaries is 46% at junior level, 55% at intermediate level and 41% at senior level. In France, both minimum and maximum salaries increase with seniority levels, but the range decreases with the level of seniority (from 132% at junior level, to 110% at intermediate level and 91% at the senior level) (Table D7.2).

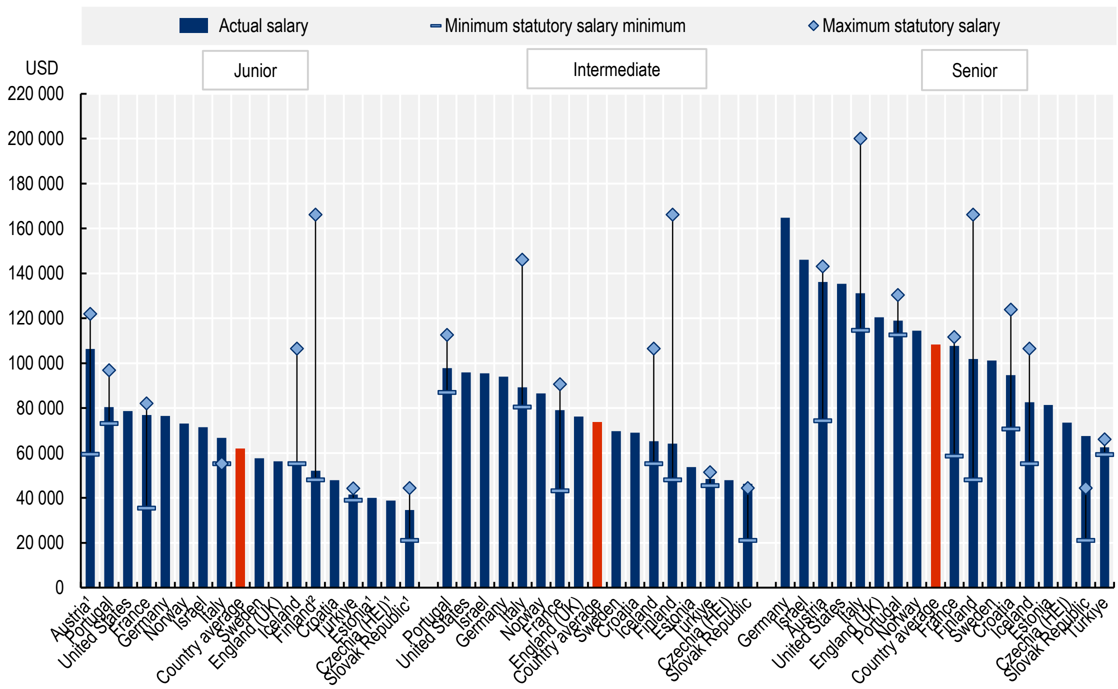
The number of grades within a seniority level may affect the difference between the minimum and maximum statutory salaries at a given seniority level. For example, a country may consider both post-doctoral fellows and lecturers to be junior positions because they are both possible positions for those starting an academic career. Each of these grades may have a narrow salary range, but when considered together as junior staff, the span between the minimum and maximum salaries might be quite large. In contrast, a country that only has one grade in the junior category might have a much smaller range, even if salaries within that grade have a wider range than a country with several grades. Thus, the combination of the number of grades and the way these grades are mapped onto seniority levels may affect the salary range.

In Iceland, the Netherlands, Poland and the Slovak Republic, statutory minimum and maximum salaries apply to all tertiary staff on academic career tracks, whatever their seniority level. In Finland, the collective agreement on salaries does not recognise seniority levels, but the nature and responsibility of the work, the interaction skills, knowledge and skills required by the tasks is taken into account to define a person's salary category. Then a junior staff would not be placed into a salary category in the higher end, and similarly no senior staff would be placed into a salary category in the lower end. Among these five countries, the maximum salary exceeds the minimum by 93% in Iceland and by more than 240% in Finland (Figure D7.2). This does not mean that staff with different seniority levels will necessarily reach the same salaries. For example, in the Slovak Republic salary progression depends on qualifications, responsibilities and number of years in service, and the responsibilities associated with positions at junior, intermediate and senior levels may be associated with different ranges of salaries.

Among the seven countries with available data on salaries of staff on academic track in tertiary institutions providing short-cycle tertiary programmes, the differences between minimum and maximum salaries at the different levels of seniority are similar to those in tertiary institutions providing bachelor's, master’s and doctoral or equivalent programmes (Table D7.2).

Figure D7.2. Average actual academic staff salaries compared to the statutory minimum and maximum salaries, by seniority (2023)

Salaries of tertiary academic staff in bachelor's, master's and doctoral or equivalent programmes, in equivalent USD converted using PPPs for private consumption



1. Actual salaries of full-time equivalent staff.
2. Statutory salaries for all categories of academic staff on an academic career track combined.
For data, see Table D7.2 and Table D7.3. For a link to download the data, see Tables and Notes section.

Average actual salaries

In addition to statutory salaries, tertiary academic staff may also receive additional bonuses and allowances that are part of their salaries. Some of these allowances may be similar to those for teachers in primary and secondary education, such as annual bonuses, extra pay for holidays or sick-leave pay, but tertiary academic staff may also receive allowances that are specifically related to research activities. For example, academic staff in Colombia and Iceland can receive allowances for academic output such as journal articles, while those in Germany can receive payments for special performance in areas such as research, teaching or arts among others (for more information see *Education at a Glance 2025 Sources, Methodologies and Technical Notes* – (https://doi.org/10.1787/fcfaf2d1-en).

Contribution to research through the publication of academic outputs can affect the compensation of tertiary academic staff in different ways. In Colombia, the publication of academic outputs is rewarded through increased salaries (depending on the number and type of publications up to an annual limit). In Finland, staff performance evaluations take a number of aspects into account, including research merit, pedagogical merit, and social and university community merit. These evaluations result in salary increases ranging from 6% to 50%, varying according to four different performance categories.

Additional allowances and bonuses can account for a substantial portion of annual salaries, which explains the difference between statutory and actual salaries within countries, and also part of the differences in actual salaries across countries (Figure D7.2 and Table D7.3). In Italy, additional payments are responsible for around 5% of the salaries paid while in France this share is around 17%. As only few countries have data available on the actual salaries of tertiary staff in institutions providing short-cycle programmes, the analysis here focuses on actual salaries in tertiary in educational institutions providing bachelor's, master's and doctoral or equivalent programmes.

Actual salaries by categories of staff and seniority level

For tertiary educational institutions providing bachelor's, master's and doctoral or equivalent programmes, information on the average actual salaries for all staff on academic career track, at all levels of seniority combined is available in 17 countries and economies. The average actual salary across these countries amounts to USD 77 321, ranging from USD 48 413 in the Slovak Republic to more than twice this amount in Austria (USD 112 432) (Table D7.3).

Actual salaries broken down by seniority are available in most of these countries and economies and a few additional ones, with 17 countries and economies having available data for some or all of the three seniority levels (junior, intermediate and senior). On average, actual salaries increase with seniority level, with junior staff earning USD 61 958, intermediate staff USD 73 682 and senior staff USD 108 255. This pattern is also true for all countries and economies with data on average actual salaries by seniority level, although the extent of the increase varies. Average actual salaries of senior staff are less than 40% higher than those for junior staff in Austria and France (countries which all also have smaller differences in statutory salaries across seniority levels), but are more than twice those of junior staff in England (United Kingdom), Estonia, Germany and Israel. In several of these countries, salaries are determined by tertiary institutions, which may lead to large differences between the salaries of tertiary academic staff (Figure D7.2 and Table D7.3).

Average actual salaries for other academic staff not on academic career tracks and for employed doctoral candidates are much lower than those for all academic staff on an academic career track combined. Among the ten countries with available data, average actual salaries of academic staff not on academic career tracks are also lower than those of junior staff on academic career tracks in six of them. They are at least 25% lower in Estonia, France, Iceland, and Norway. In contrast, they are at least 15% higher in Czechia, Israel and Türkiye. Employed doctoral candidates have the lowest actual salaries among all categories of staff considered, but the data are available in very few countries (Table D7.3).

Actual salaries by gender

Almost all countries with available data on average actual salaries for tertiary academic staff also have a breakdown of actual salaries by gender, except for Latvia and the Slovak Republic.

Average actual salaries are higher for men than for women in nearly all countries and for all seniority categories of tertiary academic staff. This is the case for academic staff on an academic career track and also academic staff not on academic career track and employed doctoral candidates, however only 10 countries have data by gender for staff both on and not on academic career track and 5 countries have data for employed doctoral candidates. The exceptions are Iceland, where average actual salaries of male junior staff on academic career tracks are 3% lower than their female peers, and Norway, where actual salaries of academic staff not on an academic career track are 10% lower for men than women. In all other countries, actual salaries are higher for men than women, but the difference is less than 10% for most categories of academic staff on academic career tracks (Table D7.3).

Gender differences widen when comparing the average actual salaries of men and women for all categories of tertiary academic staff on academic career track combined. Average actual salaries are at least 15% higher for men than women in Estonia, Finland, Israel and Slovenia, and the difference exceeds 25% in Hungary. This suggests that women are disproportionately employed in less senior roles (Table D7.3).

Actual salaries by age

Actual salaries tend to increase with age. This effect is unsurprisingly most pronounced for aggregated actual salaries that do not take seniority levels into account, since the seniority level of staff also tends to increase with age. Averaged across 15 countries with available data on actual salaries of all tertiary academic staff on academic career track, the actual salaries of 55-64 year-olds are 58% higher than the actual salaries of 25-34 year-olds. In all countries with available data, the difference is at least 20% between these two age groups, and exceeds 90% in Austria, France and Slovenia (Table D7.4, available on line).

Actual salaries for other academic staff not on career tracks also increase with age, but to a lesser extent. Among the few countries with available information, the largest gap between the average actual salaries of 55-64 year-olds and those of 25-34 year-olds is in Portugal, where it is 48% (Table D7.4, available on line).

Some of these differences result from the fact that more senior positions are associated with higher salaries, as noted above, meaning they partly reflect the differences in statutory salaries for different seniority levels. Moreover, the characteristics of salary progression, where salaries increase through promotion as opposed to length of employment, could also explain differences between countries. Furthermore, since allowances and additional payments are included in average actual salaries, older staff might be eligible for more allowances, pushing their actual salaries upwards.

Salaries of tertiary academic staff relative to tertiary-educated workers

Tertiary academic staff on academic career track have among the highest qualification levels in the population. Most of the staff in this group will have completed a doctorate in order to teach and research in public tertiary institutions. In contrast, on average across OECD countries, just 1% of 25-64 year-olds have a doctoral degree or equivalent (see Table A1.1).

As in other professions, salary levels may be important for attracting and retaining academic staff in public tertiary institutions. On average, earnings of tertiary academic staff are on a par with other tertiary-educated workers across countries with available data. Among the 15 countries and economies with available information on both the actual salaries of tertiary academic staff (all seniority levels combined) and the earnings of tertiary-educated workers, academic staff salaries range from 85% or less of the earnings of tertiary-educated workers in Hungary, the Netherlands and the United States to 196% in Portugal. However, in half of these countries, the difference is less than 5% (below the earnings of tertiary educated workers in Austria, France, Norway and the Slovak Republic, and above in Estonia and Germany) (Figure D7.3).

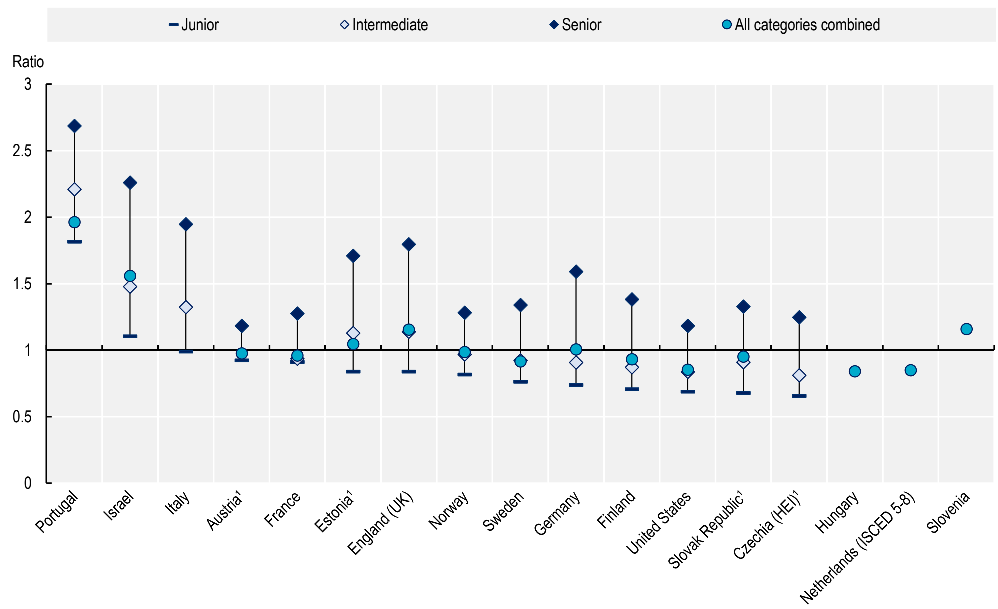
However, as this ratio covers all tertiary academic staff on academic career tracks, it may hide large differences due to seniority levels. In all countries and economies except for Israel, the actual salaries of junior academic staff are lower than the earnings of tertiary-educated workers, ranging from less than 70% of earnings of tertiary academic staff in Czechia and the Slovak Republic to 111% or more in Israel and Portugal. On average across countries with available data, junior staff earn 89% of comparably educated tertiary workers' salaries (Figure D7.3).

Similarly, actual salaries of tertiary academic staff at intermediate level are also lower than those of tertiary-educated workers in all but five countries and economies: they are 13-14% higher in England (United Kingdom) and Estonia, 33% higher in Italy, 48% higher in Israel and 121% higher in Portugal. On average, intermediate staff earnings are on par with other tertiary educated workers across countries with available data (Figure D7.3).

At senior level, actual salaries of academic staff are higher than the earnings of tertiary-educated workers in all countries and economies, averaging 59% more overall. The difference ranges from 18% higher in Austria and the United States to 169% higher in Portugal. Note however that the data from Austria cover only a subset of institutions and might not be representative (Figure D7.3).

Figure D7.3. Average actual academic staff salaries relative to earnings of tertiary-educated workers, by seniority (2023)

Average actual salaries of full-time academic staff in tertiary institutions providing bachelor's, master's and doctoral programmes relative to the earnings of full-time, full-year workers with a bachelor's degree or higher qualification



1. Actual salaries of full-time equivalent staff.

For a link to download the data, see Tables and Notes section.

Definitions

Academic staff are defined personnel in a tertiary educational institution whose primary or major functions involves the planning, organisation and conducting of group activities whereby students' knowledge, skills and attitudes develop as stipulated by educational programmes. Academic staff with some teaching responsibilities include personnel employed at tertiary educational institutions whose primary assignment is instruction and/or research with some teaching responsibilities; personnel with some teaching responsibilities who hold an academic rank with such titles as professor, associate professor, assistant professor, instructor, lecturer, researcher or the equivalent of any of these academic ranks; and personnel with other leadership titles (e.g. dean, director, associate dean, assistant dean, chair or head of department), if they have some teaching responsibilities. Academic staff do not include staff such as teaching and research assistants with some teaching responsibilities, student teachers, student researchers, teachers' aides and paraprofessionals. Nor do they include academic staff mainly devoted to research and employed by independent, organisationally separate, government research institutions in cases where the connection between tertiary educational institutions and research institutions is purely administrative.

Actual salaries refer to the annual average earnings received by full-time academic staff aged 25-64 before taxes. It is the gross salary from the employee's point of view: it includes the part of social security contributions and pension-scheme contributions that are paid by the employees (even if deducted automatically from the employees' gross salary by the employer). However, the employers' premium for social security and pension is excluded. Actual salaries also include work-related payments, such as annual bonuses, results-related bonuses, extra pay for holidays and sick-leave pay. Income from other sources, such as government social transfers, investment income and any other income that is not directly related to their profession is not included.

Earnings for workers with tertiary education are average earnings for full-time, full-year workers aged 25-64 with an education at ISCED level 5, 6, 7 or 8.

Instructional personnel other than academic staff are personnel in tertiary educational institutions who are not academic staff but are employed on a full- or part-time basis for the primary purpose of assisting academic staff in classroom instruction, laboratory instruction or in the conduct of research and receiving payment (in cash or in kind) for their activity. They include employed doctoral candidates (doctoral candidates employed on a full- or part-time basis by their institution during their doctoral degree) and teaching and research assistants (personnel employed on a full- or part-time basis for the primary purpose of supporting academic staff in classroom instruction, laboratory instruction or in the conduct of research). Teaching and research assistants are graduate students (other than doctoral candidates) or other personnel who hold such titles as teaching assistant, teaching associate, teaching fellow, research assistant or equivalent personnel with other titles.

Maximum statutory salary refers to the maximum annual statutory salary for full-time tertiary staff in public tertiary educational institutions as indicated in official documents (e.g. national regulations, collective agreements).

Minimum statutory salary refers to the minimum annual statutory salary for full-time tertiary staff in public tertiary educational institutions as indicated in official documents (e.g. national regulations, collective agreements).

Statutory salaries refer to scheduled salaries according to official pay scales. The salaries reported are gross (total sum paid by the employer) less the employer's contribution to social security and pension, according to existing salary scales. Salaries are "before tax" (i.e. before deductions for income tax). Statutory salaries also include additional payments that all academic staff receive and that constitutes a regular part of the annual salary, such as 13th month pay.

Tertiary staff refers to personnel in tertiary educational institutions whose primary assignment is instruction and/or research activities. The classification of tertiary staff is based on the primary or major functions performed by staff. It includes tertiary academic staff and other staff.

Methodology

The reference period for staff salaries is the academic year 2022/23 (where the academic year begins on the second half of the calendar year 2022 and ends in the first half of the calendar year 2023), or the academic year 2023 where the school year starts in the first half of the calendar year 2023. For ease of reference in the publication, the reference year is given as 2023.

Salaries were converted into equivalent USD using purchasing power parities (PPPs) for private consumption from the OECD Data Explorer on national accounts. These PPPs refer to the calendar year and have been adjusted to refer to January 2023 for the conversion of salaries.

In Figure D7.3, the ratios of salaries of tertiary staff to earnings for similarly educated full-time, full-year workers aged 25-64 are calculated using a similar methodology to Chapter D3. The ratios have been calculated for countries for which these data are available. When data on earnings of workers referred to a different reference year than the 2023 reference year used for salaries of tertiary academic staff, a deflator has been used to adjust earnings data to 2023.

For more information, please see the *OECD Handbook for Internationally Comparative Education Statistics* (OECD, 2018[1]) and *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)) for country-specific notes.

Sources

Data on salaries of tertiary academic staff are from the 2024 OECD-INES-NESLI data collection on Salaries of Tertiary Academic Staff and refer to the school year 2022/23 (or 2023).

Data on the earnings of workers are based on the regular data collection by the OECD Labour Market and Social Outcomes of Learning Network.

References

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264304444-en. [1]

Tables and Notes

Chapter D7 Tables

Table D7.1	Use of national statutory salaries for academic staff, by tertiary education level (2023)
Table D7.2	Minimum and maximum statutory salaries for academic staff, by tertiary education level (2023)
Table D7.3	Actual salaries of academic staff, by tertiary education level, category of staff and gender (2023)
WEB Table D7.4	*Actual salaries of academic staff, by tertiary education level, category of staff and age group (2023)*
WEB Table D7.5	*Reporting of additional payments that all academic staff receive and inclusion of pension/social security contributions in statutory salaries, by tertiary education level (2023)*
WEB Table D7.6	*Reporting of pension/social security contributions in actual salaries of academic staff, by tertiary education level (2023)*

StatLink https://stat.link/j513zl

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D7.1. Use of national statutory salaries for academic staff, by tertiary education level (2023)

Who determines salaries

Central/State = Central/state government or top-level authorities

Prov/Reg = Provincial/regional authorities or sub-regional/inter-municipal authorities

Local = Local authorities

Institutions = tertiary institutions

More than one = More than one authority level

Collective = Collective agreement

Individual = Individual negotiation

1. The compensation system varies between different types of public tertiary institutions: in Czechia, between tertiary professional schools (ISCED 655, i.e. bachelor's level with a vocational orientation) and higher educational institutions (HEIs) and in the Netherlands, between universities of applied sciences (ISCED 5-8, including short-term tertiary education) and universities (ISCED 6-8). Rows for tertiary professional schools in Czechia and universities in the Netherlands are available on line.

2. Statutory salaries for all categories of academic staff on an academic career track combined in educational institutions for bachelor's, master's and doctoral or equivalent programmes (also covering short-cycle tertiary programmes in the Netherlands).
3. Junior academic staff includes employed doctoral candidates
4. Statutory salaries for all categories of academic staff on an academic career track combined in educational institutions for short-cycle tertiary programmes.

Table D7.2. Minimum and maximum statutory salaries for academic staff, by tertiary education level (2023)

1. Excludes public universities and universities of applied sciences.
2. The compensation system varies between different types of public tertiary institutions: in Czechia, between tertiary professional schools (ISCED 655, i.e. bachelor's level with a vocational orientation) and higher educational institutions (HEIs) and in the Netherlands, between universities of applied sciences (ISCED 5-8) and universities (ISCED 6-8). Rows for tertiary professional schools in Czechia and universities in the Netherlands are available on line.
3. Statutory salaries for all categories of academic staff on an academic career track combined in educational institutions for bachelor's, master's and doctoral or equivalent programmes (also covering short-cycle tertiary programmes in the Netherlands).
4. Junior academic staff includes employed doctoral candidates.
5. Year of reference: 2022.
6. The data necessary to present minimum and maximum statutory salaries that apply to a particular academic staff category is currently unavailable. The minimum and maximum salary amounts span the entire statutory salary range, irrespective of academic staff category.
7. Statutory salaries for all categories of academic staff on an academic career track combined in educational institutions for short-cycle tertiary programmes.

Table D7.3. Actual salaries of academic staff, by tertiary education level, category of staff and gender (2023)

Note: Columns showing the data for employed doctoral candidates and rows showing the data broken down by gender are available on line.

1. Actual salaries of full-time equivalent staff.
2. Excludes public universities and universities of applied sciences.
3. The compensation system varies between different types of public tertiary institutions: in Czechia, between tertiary professional schools (ISCED 655, i.e. bachelor's level with a vocational orientation) and higher educational institutions (HEIs) and in the Netherlands, between universities of applied sciences (ISCED 5-8) and universities (ISCED 6-8). Rows for tertiary professional schools in Czechia and universities in the Netherlands are available on line.
4. Junior academic staff includes employed doctoral candidates.
5. Year of reference: 2022.
6. Government dependent private institutions.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table D7.1. Use of national statutory salaries for academic staff, by tertiary education level (2023)

Public institutions

	Short-cycle tertiary						Bachelor's, master's and doctoral or equivalent					
	Existence of statutory salaries				Decision-making level for determining salaries		Existence of statutory salaries				Decision-making level for determining salaries	
	Academic staff on academic career track			Other academic staff not on academic career track	Academic staff on academic career track	Other academic staff not on academic career track	Academic staff on academic career track			Other academic staff not on academic career track	Academic staff on academic career track	Other academic staff not on academic career track
	Junior	Inter-mediate	Senior				Junior	Inter-mediate	Senior			
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	a	a	a	Yes	a	Central/State	Yes	a	Yes	a	Central/State	a
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	Yes	Yes	Yes	Yes	Central/State	Central/State	Yes	Yes	Yes	a	Central/State	a
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m
Czechia (HEI)[1]	a	a	a	a	a	a	a	a	a	a	Institution	Institution
Denmark	m	m	m	m	m	m	m	m	m	m	m	m
Estonia	a	a	a	a	a	a	a	a	a	a	Institution	a
Finland[2]	a	a	a	a	a	a	Yes	Yes	Yes	m	Collective	m
France	Yes	Yes	Yes	a	Central/State	Institution	Yes	Yes	Yes	a	Central/State	Institution
Germany[3]	m	m	m	m	m	m	Yes	Yes	Yes	m	More than one	More than one
Greece	Yes	Yes	Yes	Yes	Central/State	Central/State	Yes	Yes	Yes	Yes	Central/State	Central/State
Hungary	a	a	a	a	a	a	Yes	Yes	Yes	Yes	Central/State	Central/State
Iceland	Yes	Yes	Yes	Yes	Collective	Collective	Yes	Yes	Yes	Yes	Collective	Collective
Ireland	m	m	m	m	m	m	m	m	m	m	m	m
Israel	m	m	m	m	m	m	m	m	m	m	m	m
Italy	a	a	a	a	a	a	Yes	Yes	Yes	No	Central/State	Institution
Japan	a	a	a	a	Institution	Institution	a	a	a	a	Institution	Institution
Korea	m	m	m	m	More than one	More than one	m	m	m	m	More than one	More than one
Latvia	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	a	a	a	a	Institution	Institution	a	a	a	a	Institution	Institution
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands (ISCED 5-8)[1, 2]	a	a	a	a	a	a	Yes	Yes	Yes	m	Collective	Collective
New Zealand	a	a	a	a	Institution	Institution	a	a	a	a	Institution	Institution
Norway	a	a	a	a	Institution	Institution	a	a	a	a	Institution	Institution
Poland[2]	a	a	a	a	a	a	Yes	Yes	Yes	a	Central/State	Central/State
Portugal	a	a	a	a	a	a	Yes	Yes	Yes	a	Central/State	Institution
Slovak Republic	a	a	a	Yes	a	Central/State	Yes	Yes	Yes	a	Central/State	a
Slovenia	a	a	a	Yes	a	Central/State	Yes	Yes	Yes	a	Central/State	a
Spain[4]	Yes	Yes	Yes	m	More than one	m	Yes	Yes	Yes	Yes	More than one	Prov/Reg
Sweden	a	a	a	a	Individual	Individual	a	a	a	a	Individual	Individual
Switzerland	a	a	a	a	a	a	m	m	m	m	m	m
Türkiye	Yes	Yes	Yes	Yes	Central/State	Central/State	Yes	Yes	Yes	Yes	Central/State	Central/State
United States	a	a	a	a	Institution	Institution	a	a	a	a	Institution	Institution
Other economies												
Flemish Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m	m	m
French Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m	m	m
England (UK)	a	a	a	a	a	a	a	a	a	a	a	a
Scotland (UK)	m	m	m	m	m	m	m	m	m	m	m	m
OECD average	m	m	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	Yes	Yes	Yes	a	More than one	a	Yes	Yes	Yes	a	More than one	a
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	a	a	a	a	a	a	m	m	Yes	a	Central/State	a
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	Yes	Yes	Yes	Yes	Central/State	Central/State	Yes	Yes	Yes	Yes	Central/State	Central/State
Romania	a	a	a	a	a	a	Yes	Yes	Yes	Yes	Central/State	Central/State
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	m	m	m	m	m	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D7.2. Minimum and maximum statutory salaries for academic staff, by tertiary education level (2023)

By level of education in public institutions, in equivalent USD converted using PPPs for private compensation

	Short-cycle tertiary								Bachelor's, master's and doctoral or equivalent							
	Academic staff on academic career track						Other academic staff not on academic career track		Academic staff on academic career track						Other academic staff not on academic career track	
	Junior		Intermediate		Senior				Junior		Intermediate		Senior			
	Minimum salary	Maximum salary	Minimum salary	Maximum salary	Minimum salary	Maximum salary	Minimum salary	Maximum salary	Minimum salary	Maximum salary	Minimum salary	Maximum salary	Minimum salary	Maximum salary	Minimum salary	Maximum salary
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria[1]	a	a	a	a	a	a	57 608	102 365	59 440	121 918	a	a	74 300	143 076	a	a
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Chile	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Colombia	28 905	28 905	33 784	36 349	39 141	39 141	20 599	20 599	21 821	32 736	39 619	77 559	52 042	85 617	a	a
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Czechia (HEI)[2]	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Denmark	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Estonia	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Finland[3]	a	a	a	a	a	a	a	a	48 098	166 165	48 098	166 165	48 098	166 165	m	m
France	35 432	82 071	43 133	90 573	58 599	111 649	a	a	35 432	82 071	43 133	90 573	58 599	111 649	a	a
Germany[4]	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	29 527	42 049	33 435	47 574	39 082	55 656	25 189	35 870	32 575	46 387	36 913	52 567	43 420	61 836	30 386	43 277
Hungary	a	a	a	a	a	a	a	a	13 283	19 386	19 746	30 516	26 926	38 055	18 309	19 386
Iceland	55 210	106 443	55 210	106 443	55 210	106 443	41 556	48 739	55 210	106 443	55 210	106 443	55 210	106 443	41 556	48 739
Ireland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Israel	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Italy[5]	a	a	a	a	a	a	a	a	55 205	55 205	80 410	146 102	114 577	200 008	m	m
Japan	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Korea	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Lithuania	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands (ISCED 5-8)[2,3,6]	a	a	a	a	a	a	a	a	55 275	114 776	55 275	114 776	55 275	114 776	m	m
New Zealand	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Norway	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Poland[3]	a	a	a	a	a	a	a	a	22 155	44 310	22 155	44 310	22 155	44 310	a	a
Portugal	a	a	a	a	a	a	a	a	73 094	96 800	86 923	112 604	112 604	130 384	a	a
Slovak Republic	a	a	a	a	a	a	23 788	38 411	21 003	44 361	21 003	44 361	21 003	44 361	a	a
Slovenia	a	a	a	a	a	a	37 232	68 776	53 623	65 241	60 319	73 387	73 387	85 853	a	a
Spain[7]	55 870	83 374	55 870	83 374	55 870	83 374	m	m	37 336	55 382	52 217	122 718	74 965	146 898	2 374	58 546
Sweden	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Switzerland	a	a	a	a	a	a	a	a	m	m	m	m	m	m	m	m
Türkiye	38 959	44 302	45 408	51 480	59 241	66 132	69 970	78 185	38 959	44 302	45 408	51 480	59 241	66 132	69 970	78 185
United States	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Other economies																
Flemish Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
French Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
England (UK)	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Scotland (UK)	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
OECD average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries																
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	28 779	59 063	31 880	77 644	97 055	120 092	a	a	28 779	59 063	31 880	77 644	97 055	120 092	a	a
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	a	a	a	a	a	a	a	a	m	m	m	m	70 630	123 784	a	a
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Romania	a	a	a	a	a	a	a	a	35 547	43 060	39 036	44 741	66 876	98 620	48 383	62 765
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Country average	38 955	63 744	42 674	70 491	57 743	83 212	39 420	56 135	39 847	68 892	46 685	82 965	62 655	103 519	35 163	51 817

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D7.3. Actual salaries of academic staff, by tertiary education level, category of staff and gender (2023)

Annual average salaries of full-time 25-64 year-old staff with some teaching responsibilities at tertiary level, in equivalent USD converted using PPPs for private compensation

	Short-cycle tertiary					Bachelor's, master's and doctoral or equivalent				
	Academic staff on academic career track				Other academic staff not on academic career track	Academic staff on academic career track				Other academic staff not on academic career track
	Junior	Intermediate	Senior	All staff (total)		Junior	Intermediate	Senior	All staff (total)	
OECD countries	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)
Australia	m	m	m	m	m	m	m	m	m	m
Austria[1, 2]	a	a	a	a	101 464	106 359	a	136 186	112 432	a
Canada	m	m	m	m	m	m	m	m	m	m
Chile	m	m	m	m	m	m	m	m	m	m
Colombia	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m
Czechia (HEI)[1, 3]	a	a	a	a	a	38 769	47 845	73 549	m	57 134
Denmark	m	m	m	m	m	m	m	m	m	m
Estonia[1]	a	a	a	a	a	39 989	53 740	81 336	49 866	a
Finland	a	a	a	a	a	52 128	64 214	101 908	68 777	54 000
France	76 970	79 033	107 628	81 161	45 598	76 970	79 033	107 628	81 161	45 598
Germany[4]	m	m	m	m	m	76 476	93 987	164 717	104 111[d]	m
Greece	m	m	m	m	m	m	m	m	m	m
Hungary	a	a	a	a	a	x(10)	x(10)	x(10)	49 026	m
Iceland[1]	a	a	a	a	a	54 314	65 217	82 609	65 699	33 735
Ireland	m	m	m	m	m	m	m	m	m	m
Israel	71 434	95 528	146 076	100 774	84 956	71 434	95 528	146 076	100 774	84 956
Italy[5]	a	a	a	a	a	66 708	89 245	131 120	m	m
Japan	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m
Latvia[1]	23 684	34 060	49 146	37 469	m	m	m	m	m	m
Lithuania	m	m	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m
Netherlands (ISCED 5-8)[3]	a	a	a	a	a	x(10)	x(10)	x(10)	90 400	m
New Zealand	m	m	m	m	m	m	m	m	m	m
Norway	m	m	m	m	m	73 063	86 539	114 468	88 127	52 155
Poland	a	a	a	a	a	m	m	m	m	m
Portugal	m	m	m	m	m	80 414	97 834	119 000	86 936	60 398
Slovak Republic[1]	a	a	a	a	m	34 590	46 332	67 538	48 413	a
Slovenia	a	a	a	a	59 220	x(10)	x(10)	x(10)	74 447	a
Spain	m	m	m	m	m	m	m	m	m	m
Sweden	57 654	69 735	101 152	69 204	53 607	57 654	69 735	101 152	69 204	53 607
Switzerland	a	a	a	a	a	m	m	m	m	m
Türkiye	41 583	48 435	62 504	m	74 064	41 583	48 435	62 504	m	74 064
United States	78 740	95 934	135 344	97 716	68 683	78 740	95 934	135 344	97 716	68 683
Other economies										
Flemish Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m
French Comm. (Belgium)	m	m	m	m	m	m	m	m	m	m
England (UK)[6]	m	m	m	m	m	56 244	76 298	120 463	77 429	a
Scotland (UK)	m	m	m	m	m	m	m	m	m	m
OECD average	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries										
Argentina	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	a	m	m	m	m	a
Bulgaria	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m
Croatia	a	a	a	a	a	47 854	68 986	94 734	m	a
India	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m
Romania	a	a	a	a	a	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m
EU25 average	m	m	m	m	m	m	m	m	m	m
Country average	58 344	70 454	100 308	77 265	69 656	61 958	73 682	108 255	77 321	58 433

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Chapter D8. How severe are teacher shortages across countries?

Highlights

- Based on data from 14 countries and economies with available data, unfilled vacancies for fully qualified teachers at the start of the school year vary in absolute terms, but remain below 3% of all teaching posts in all cases except Austria and Sweden. In most countries, the share of unfilled posts is higher in secondary education than in primary, pointing to greater recruitment challenges at the upper levels.
- Across 19 countries and economies with available data, an average of 6.5% of fully qualified teachers from pre-primary to upper secondary education left the profession in 2022/23, with wide variation – from under 3% in France, Greece, Ireland and Israel to over 10% in Denmark, Estonia and Lithuania. Attrition rates are slightly higher in pre-primary education (7.3%) and relatively similar in primary (5.8%) and secondary education (5.9%).
- There is no single pattern behind teachers leaving the profession: in some countries, resignations dominate; in others, retirements are the main driver. On average, 51% of teachers who left resigned. Alarmingly, in five of the seventh countries with data on seniority (Austria, Estonia, Israel, Poland and the Slovak Republic), at least 30% of those resigning had been teaching for less than five years.

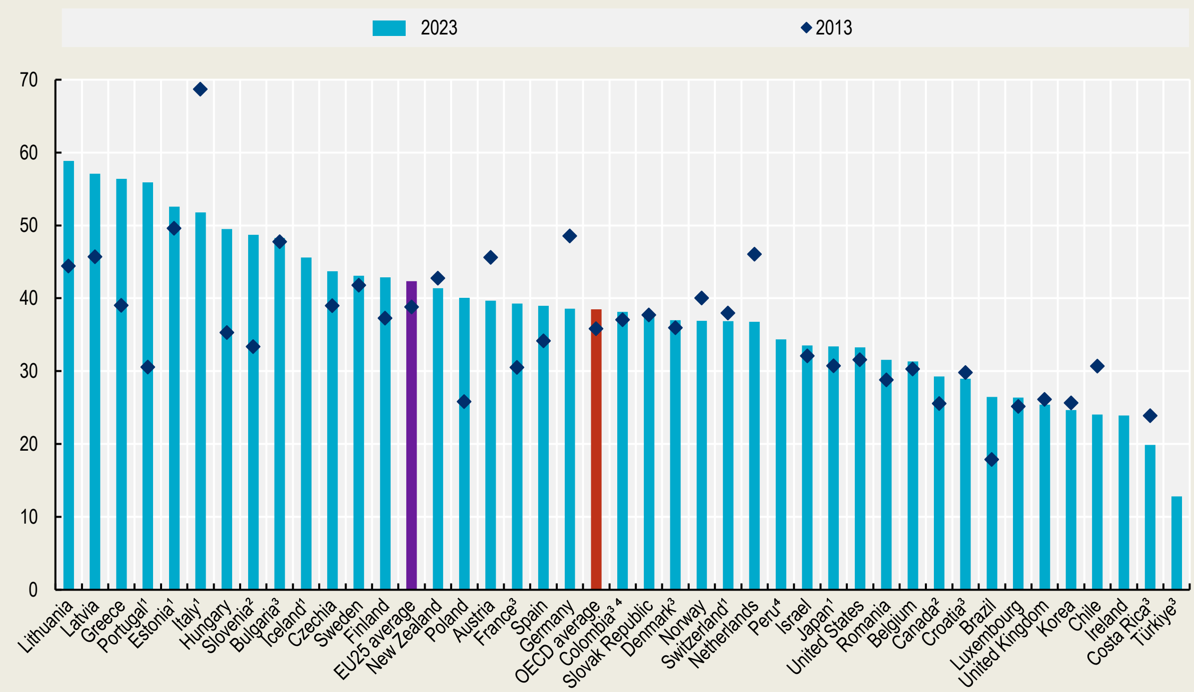
Context

Teacher shortages have become a pressing policy concern in most OECD countries, particularly at the start of the school year. The attractiveness of the profession has declined in some countries, influenced by factors such as relatively low pay, high workloads, administrative burdens, and limited career progression, making it more difficult to attract and retain qualified teachers (OECD, 2020[1]). Adding to these challenges is the increasing diversity in teachers' qualification levels, with some holding only upper secondary qualifications while others have bachelor's or master's degrees. Demographic pressures further compound the issue, with a growing share of the workforce nearing retirement. Shortages are often most acute in rural and disadvantaged areas, exacerbating inequalities in access to quality education (OECD, 2023[2]).

No single indicator can fully capture the scale or nature of teacher shortages, nor the ways in which teachers are distributed across schools. Shortages may manifest as vacant positions at the start of the academic year, high attrition rates – particularly among early-career teachers – or a growing reliance on teachers who do not meet national qualification standards. Each of these indicators reflects a different dimension of the problem and points to systemic weaknesses in teacher workforce planning, training and support. In response, many countries are planning to implement measures in the next few years to make teaching more attractive and to strengthen teacher recruitment and retention (Box D8.3). This chapter explores these interconnected issues to provide a clearer understanding of teacher supply dynamics and the policy strategies under development.

Figure D8.1. Trends in the share of teachers aged 50 and over in secondary education (2013 and 2023)

In per cent, full-time and part-time, public and private institutions



Note: the scope covers all classroom teachers, with no distinction between fully and non-fully qualified teachers.
1. Including post-secondary non-tertiary education.
2. Excluding upper secondary education in Slovenia. Excluding lower secondary education in Canada.
3. Year of reference differs from 2013.
4. Year of reference differs from 2023.
For data, see Table D8.1. For a link to download the data, see Tables and Notes section.

Other findings

- In 2023, over one-third of teachers in primary and secondary education across OECD countries were aged 50 or older –a share that reflects the ageing of a workforce where teaching careers often span several decades. In secondary education, the share rose from 36% in 2013 to 38% in 2023, with increases of over 8 percentage points in about one-quarter of OECD countries, pointing to the need for long-term workforce planning.
- In parallel, the pipeline of teachers under 30 remains low: 17% in pre-primary, 13% in primary and 9% in secondary education. This may reflect persistently low entry rates, partly because teachers are required to complete tertiary education before entering the profession, which challenges efforts to renew the workforce and attract new talent.
- The proportion of non-fully qualified teachers is often used as an indicator of staffing pressures. On average across OECD countries, these teachers are more prevalent in secondary education (7.1%) than in primary education (5.6%), although the disparity is considerably wider in some countries, highlighting uneven recruitment challenges across education levels.

- Over half of countries and economies with available data (16 out of 28) have introduced structured pathways to attract second-career teachers. These include employment-based routes, targeted academic training, recognition of prior experience and special certification processes.

Note

The process for entering the teaching profession varies across countries and affects how teacher shortages are measured. In about one-third of countries and economies, applicants must pass a competitive exam to fill a limited number of slots, after which successful candidates are assigned to schools. In the remaining systems, graduates receive a teaching diploma and apply directly to schools to fill available positions. As a result, countries and economies with competitive exams report unfilled vacancies based on the number of exam-authorised positions that remain vacant at the start of the school year, while in other systems, they are based on the number of advertised school-level vacancies still open at that time. This chapter uses the start of the year to assess recruitment pressures, while recognising that many of these vacancies are subsequently filled during the school year, either by fully or non-fully qualified teachers.

Analysis

Teacher shortages in pre-primary, primary and secondary education are a complex and multifaceted challenge that cannot be captured by a single indicator. To provide a comprehensive understanding, this chapter draws on a set of complementary metrics that shed light on different dimensions of the issue. These include the share of teachers aged over 50, which assess upcoming retirement waves and the need for generational renewal; the proportion of teachers without required teaching qualifications or/and training, reflecting recruitment difficulties and potential risks to teaching quality; the number of vacant positions at the start of the school year, highlighting immediate gaps in staffing; and teacher attrition rates, which indicate challenges in retaining staff and sustaining the workforce.

Each of these indicators offers critical insights into current pressures, long-term risks and system responses. The chapter examines how countries perform across these different dimensions to inform more targeted and effective policy solutions.

Age of the teaching workforce

The age profile of the teaching workforce is a key indicator in assessing education systems' capacity to ensure continuity, plan for future retirements and limit shortage by attracting new entrants into the profession. Across OECD countries, the teaching workforce is ageing, with particularly sharp increases between 2013 and 2023 in the share of teachers aged 50 and over in both primary and secondary education in Hungary, Latvia, Lithuania, Poland and Portugal. The ageing of the teaching profession is particularly evident in secondary education. Between 2013 and 2023, the share of teachers aged 50 and over increased from 36% to 38% on average across OECD countries, and from 39% to 42% across EU25 countries, reflecting a steady upward trend (Table D8.1).

Given that teaching careers often span several decades, a high share of teachers aged 50 or older is not unusual in itself. Overall, in about one-third of countries, more than 40% of secondary teachers are now aged 50 or older. However, in some countries the pace and scale of ageing are more concerning. In Lithuania, the share of older secondary teachers rose from 44% to 59%; similar trends were observed in Latvia (46% to 57%), Greece (39% to 56%), Portugal (31% to 56%) and Slovenia (33% to 49%). In countries where the share was already high – such as Estonia and Hungary – it has remained elevated. Only a few countries, such as Italy (where the share of older teachers fell from 69% to 52%) and Germany (where it fell from 49% to 39%), experienced significant declines, albeit from already high levels in 2013 (Figure D8.1). These figures highlight the need for strategic workforce renewal in these countries. Without stronger efforts to recruit and prepare new teachers – particularly in hard-to-staff subjects and regions (see Chapter D5 of *Education at a Glance 2024* (OECD, 2024[3])) – future retirements could exacerbate existing shortages and strain the sustainability of the profession.

In parallel, the pipeline of teachers under the age of 30 reflects the profession's age structure but tends to decline with increasing education levels – from 17% of teachers in pre-primary, to 13% in primary and just 9% in secondary education (Table D8.1). In many countries, early-career teachers may encounter challenging working conditions, relatively low starting salaries, and limited professional support, which can contribute to higher attrition rates ((OECD, 2018[4]), Figure D8.6 and Table D8.4)). While the share of teachers under 30 has declined since 2013 in many countries, this reflects broader demographic changes, later retirement ages, and an influx of second-career teachers rather than solely reduced attractiveness of the profession. In Austria, Italy, Japan and Norway, the proportion of teachers under 30 in primary and secondary education has increased over the past decade by at least 5 percentage points. However, in others, such as Brazil, Chile and Poland, the share has declined significantly, including in pre-primary education where demographic shifts or/and lower enrolment have reduced demand for new teachers (Table D8.1).

The share of young teachers is important, and countries need to implement sustained policies to attract and support new entrants. At the same time, attracting individuals from other professions, including those later in their careers, can help expand the teaching workforce. Without such efforts, ageing and attrition could gradually erode the teaching workforce, increasing the risk of shortages and making it harder to maintain education quality over time.

Teachers who do not meet national qualification standards

Fully qualified teachers refer to teachers who have fulfilled all the training and administrative requirements for teaching at a given grade and subject, according to the formal policy of a country. In contrast, non-fully qualified teachers refer to teachers entering the profession through alternative pathways (see *Definitions* section). The share of non-fully qualified teachers is often used as an indicator of teacher shortages, as it reflects the extent to which education systems are unable to recruit or retain enough fully qualified staff. Although most countries and economies aim to ensure a fully qualified teaching workforce, many still rely on teachers who do not meet national qualification standards. Unlike fully qualified teachers – who satisfy all training and administrative requirements for teaching a given subject or level – non-fully qualified teachers enter the profession through alternative pathways – and for some, teaching represents a second career choice (Box D4.1). In most countries, these teachers might have the required academic qualifications but lack mandatory certification or pedagogical training, have completed training but lack the academic degree, or in some cases lack both. The term may also include fully qualified teachers who are teaching outside their area of specialisation.

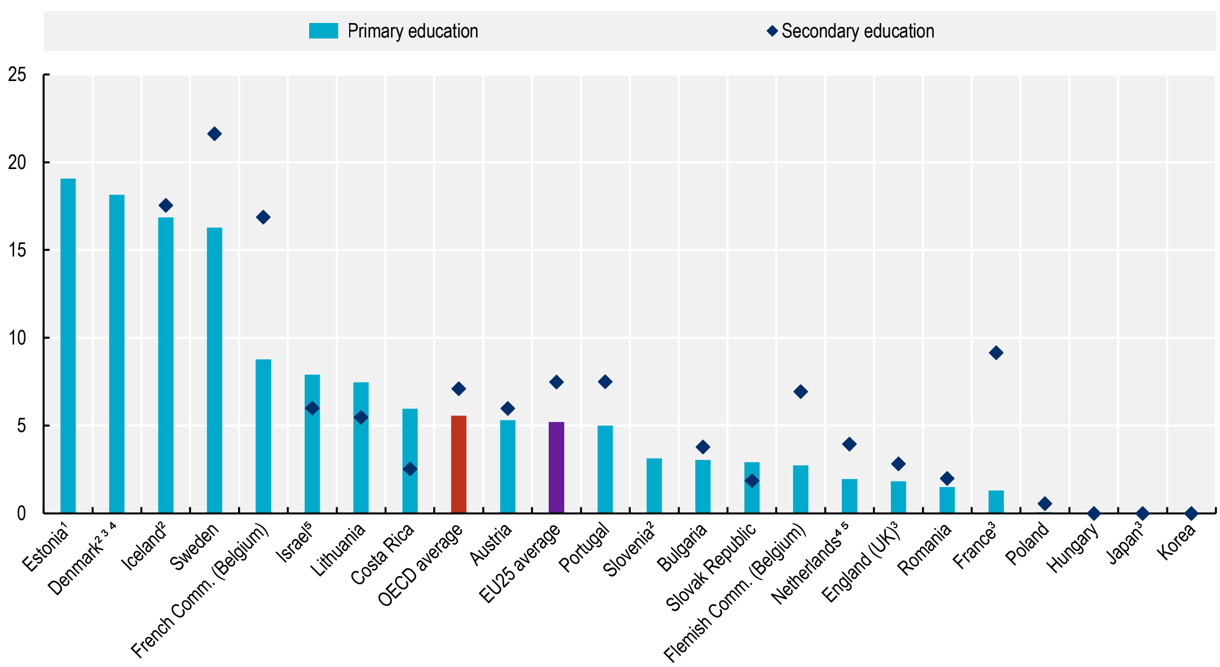
The majority of countries and economies make some use of non-fully qualified teachers, with a few exceptions such as Hungary, Japan and Korea (Table D8.2). Notably, Japan and Korea also report no – or very few – vacancies not filled by fully qualified teachers, suggesting relatively stable teacher staffing situations that may reduce the need to rely on non-fully qualified teachers (Table D8.3). For the other countries and economies, the presence of non-fully qualified teachers often reflects recruitment challenges and efforts to maintain classroom coverage despite difficulties in attracting sufficient numbers of fully qualified teachers.

Data from 2022/23 show differences across education levels. On average, the share of non-fully qualified teachers is slightly higher in secondary education (7.1%) than in primary education (5.6%), although the gap is wider in some countries and economies. For example, in France (where data refer to 2021/22), only 1.3% of primary teachers are non-fully qualified, compared to 9.1% in secondary education. In Portugal, 5.0% of primary and 7.5% of secondary teachers are not fully qualified, while in Sweden the shares rise to 16.3% in primary and 21.6% in secondary education. In more than half of the 19 countries and economies with data, less than 5% of teachers in secondary education are non-fully qualified, but the share exceeds 15% in Denmark (for both primary and lower secondary levels), Estonia (primary and secondary), Iceland and Sweden, signalling more acute shortages. In Sweden, the high shares observed partly reflect the country's strict definition of non-fully qualified teachers, which includes teachers who teach in other subjects or other grades than their certification allows. (Figure D8.2).

In several countries and economies, the share of non-fully qualified teachers has increased since 2014/15. For instance, in Estonia, the share in primary and secondary education grew from 7.6% in 2014/15 to 19.1% in 2022/23, and in Iceland, it rose from 4.5% to 16.9% in primary education. Similar upward trends were observed in Austria, Denmark, the French Community of Belgium and Portugal, reflecting growing pressures to fill teaching posts even when qualified candidates are lacking (Table D8.2). The reasons behind these patterns vary. In Denmark, many non-fully qualified teachers are university students taking a sabbatical year. They are often employed part time to help address staffing shortages within a flexible system. This may offer short-term relief, but it is important that teaching is carried out by trained teachers wherever possible to ensure that students receive education of sufficient quality. In Sweden, the rise in the share of non-fully qualified teachers stems from large-scale retirements and the need to draw from a broader pool, including substitute teachers, career changers and individuals with partial qualifications (NLS, 2023[5]).

Figure D8.2. Share of non-fully qualified teachers, by level of education (2022/23)

In per cent, full-time and part-time, public institutions



1. Primary and secondary education combined
2. Primary and lower secondary education combined.
3. Reference year differs from 2022/23.
4. Expressed in full-time equivalents, as a large majority of teachers in the Netherlands and non-fully qualified teachers in Denmark are working part time.
5. Excluding upper secondary education in Israel and upper secondary vocational education in the Netherlands.
For data, see Table D8.2. For a link to download the data, see Tables and Notes section.

Another growing issue is the diversity of qualification levels within the qualified teaching workforce. In some countries and economies, some teachers may hold only an upper secondary qualification, while others have bachelor's or master's degrees (Box D8.2). This variety affects the consistency of teaching quality, particularly when less-qualified staff are concentrated in disadvantaged schools or hard-to-staff subjects (OECD, 2018[4]). Students in these schools may have reduced access to effective instruction, which can exacerbate existing inequalities and hinder social mobility.

Ultimately, the use of non-fully qualified or less-qualified teachers – whether as a temporary response to staffing shortages or as a systemic practice – has significant implications for both the quality and equity of education if not supported with appropriate policies and conditions. Ensuring that all students are taught by well-prepared educators, including supporting non-fully qualified teachers to develop their skills, is essential for promoting equitable learning opportunities and fostering long-term workforce sustainability (Box D4.1 and (OECD, 2022[6])).

Box D8.1. Second-career teachers

Second-career teachers are individuals who transition into teaching from a different profession or career. They bring valuable skills and perspectives gained from their previous work experience, enriching the learning environment and offering students diverse insights. Given global teacher shortages and the need for experienced professionals in education, many countries have explored pathways to facilitate this career transition.

Among countries and economies with available data, over half (16 out of 28) have introduced structured pathways tailored to second-career teachers (Figure D8.3). These include employment-based routes, targeted academic training, recognition of prior experience and special certification processes.

More specifically, 7 of the 16 countries and economies with established pathways have adopted employment-based routes that allow professionals to hold teaching positions while completing teacher training. In Australia, the High Achieving Teachers (HAT) Program supports high-achieving professionals from diverse backgrounds to transition into teaching. Participants are employed in schools experiencing workforce shortages, where they receive structured support while completing an accredited teaching qualification (Australian Government, n.d.[7]). Latvia's Teaching Power initiative, the Flemish Community of Belgium's teacher-in-training (LIO) pathway and Switzerland's *formation par l'emploi* route follow similar models, enabling candidates to teach while completing teacher education programmes.

Equally common (7 out of 16 countries and economies) is the recognition of prior professional experience, leading to accelerated or flexible pathways. In Denmark, the *Merituddannelse* programme offers part-time or accelerated teaching qualifications. In Switzerland, prior experience may allow shortened training or dossier-based admission. In the Flemish Community of Belgium, entrants from other sectors are given the option to validate up to 15 years of prior experience as pay scale seniority.

In addition, three countries offer special certifications routes. In Japan, experienced professionals may obtain a "Special Certificate" after passing the Teacher Competency Examination conducted by the prefectures. In the Netherlands, eligible candidates can gain a second-career teacher certificate, contingent on passing a suitability exam and concluding concurrent training. Austria's lateral entry scheme includes a three-step aptitude process followed by employment-based training.

Specific academic and/or training routes are available for university graduates with no prior teaching qualification in almost one-third of countries with available pathways (5 out of 16). Lithuania and Sweden have fast-track programmes (i.e. shortened, intensive pedagogical study programmes of about 1-1.5 years), while Argentina, Finland and the Slovak Republic offer targeted pedagogical training for qualified graduates.

Despite increasing interest in attracting professionals from other fields into teaching, a significant number of countries and economies (12 out of 28) do not provide alternative routes for second-career teachers (Figure D8.3). However, a few of these offer limited initiatives. For example, Spain allows VET institutions to temporarily hire industry experts to meet specific skills needs, while England (United Kingdom) supports career changers with pastoral care and recruitment services.

France represents a notable exception, as all candidates (including career-changers) gain tenured teaching positions through one of three national competitive examinations. Although career changers and other teachers without full qualifications may be offered open-ended contracts after six years of service, they are still not considered fully qualified unless they pass the required national competitive examination for permanent civil servant status.

Despite the existence of alternative pathways in many countries and economies, 5 out of 28 countries and economies systematically identify second-career teachers in their education statistics. While some collect data on their qualifications and employment status, others do not distinguish them as a separate category in national data collections. In a context where the teaching profession faces declining attractiveness in many countries, it is crucial to offer clear and supportive pathways for second-career entrants – and to monitor their participation through robust data collection, so that their experiences can inform workforce planning and policy design.

For further contextual data on pathways available to second-career teachers, see the Excel file for Figure D8.3 (downloadable via the StatLink provided at the end of the chapter).

Figure D8.3. Pathways for second-chance career teachers to become fully qualified

Existence of alternative pathways for second-career teachers, OECD and partner countries and other economies

	(a) There are established pathways for second-career teachers to obtain required qualifications and become fully-qualified.	(b) Second-career teachers must follow the same qualification process as other teacher candidates if they want to be fully-qualified.	(c) Both
	14 countries and other economies	12 countries and other economies	2 countries and other economies
OECD countries	Australia, Austria, Finland, Hungary, Japan, Latvia, Lithuania, Netherlands, Slovak Republic, Sweden, Switzerland	Costa Rica, Estonia, Iceland, Luxembourg, Norway, Poland, Slovenia, Spain, Türkiye	Denmark
Other economies	Flemish Community (Belgium)	England, French Community (Belgium)	
Partner and/or accession countries	Argentina, Bulgaria	Romania	Brazil

For a link to download the data, see Tables and Notes section.

Unfilled teaching positions at the start of the school year

The lack of teachers at the start or during the school year is a growing concern in many countries. The 2022 Programme for International Student Assessment (PISA) found that, in more than half of countries and economies surveyed, school principals were more likely to report teacher shortages in their schools in 2022 than their counterparts were in 2018. On average, the percentage of students in schools whose principals reported that instruction is hindered by a lack of teaching staff increased by 21 percentage points, from 26% in 2018 to 47% in 2022. In Australia, Belgium, Chile, France, Latvia, the Netherlands, Poland and Portugal, the increase exceeded 30 percentage points. However, it is important to note that these measures are based on principals' perceptions and are not objective measures of staff shortages. Principals in different countries may have different perceptions of what constitutes a shortage of teaching or support staff in their schools (see Figure II.5.3 in PISA Results Volume II (OECD, 2023[2])).

To complement these perception-based measures, administrative data on unfilled teaching vacancies offer another perspective on staffing challenges although the concept itself is complex due to cross-country differences in how teachers are recruited. In around two-thirds of countries and economies, graduates receive a teaching diploma or certification and apply directly to schools for employment. In contrast, roughly one-third – Brazil, France, Japan, Korea, Romania, Spain and the Republic of Türkiye – require candidates to pass a competitive examination at the end of their training (Table D8.3). These exams typically offer a limited number of positions, with successful candidates assigned to schools. These structural differences affect how teacher shortages are measured. Where competitive examinations are used, unfilled vacancies are defined as open positions in the exam process that remain unfilled by fully qualified candidates at the start of the school year. In the systems where schools recruit directly – often with significant local autonomy – shortages are estimated based on the number of advertised school-level vacancies that remain open at that same point in time. Despite these methodological differences, both approaches are used by countries and economies to monitor and report the lack of fully qualified teachers.

Based on the data available for 14 countries and economies, the number of unfilled teaching vacancies across pre-primary to upper secondary education varies considerably in absolute terms – from 0 in Korea and 320 in Bulgaria to 4 778 in Austria, 5 747 in Poland and 6 704 in Sweden. At first glance, these figures may appear alarming and are often cited in media coverage without reference to the total number of teaching positions, which can lead to the scale of the problem being overstated. Expressed as a share of all teaching posts, the proportion of unfilled vacancies remains relatively low in most education systems. In 12 out of the 14 countries and economies, unfilled positions at the start of the year account for less than 3% of the teaching workforce. Only Austria (4.6%) and Sweden (5.0%) report vacancy rates above 4%, while France (0.1%), Japan (0.2%), England (United Kingdom) (0.3%), Bulgaria (0.4%) show very low vacancy levels, and Korea reports no unfilled vacancies at all (Figure D8.4 and Table D8.3).

The data on unfilled teaching vacancies, expressed as a percentage of total teaching positions, reveal notable differences between countries and economies – across education levels, over time and when compared to the number of teacher training graduates from the previous year.

In a large majority of countries and economies, the percentage of unfilled vacancies is higher in secondary education than in primary, pointing to greater recruitment challenges at the upper levels of schooling. This pattern is visible in Austria (5.1% in secondary education compared to 3.8% in primary), the Flemish Community of Belgium (2.4% versus 1.3%), the French Community of Belgium (3.1% versus 1.8%), Romania (1.9% versus 0.7%) and Sweden (5.3% versus 4.7%). These differences may reflect subject-specific shortages – particularly in science, technology, engineering and mathematics (STEM) fields – as well as the difficulty of attracting and retaining teachers for older student cohorts (see the data on unfilled vacancies by fields of study in Chapter D5 of *Education at a Glance 2024* (OECD, 2024[3])). Conversely, a few countries and economies report similar vacancy rates for both levels or even slightly lower shares of unfilled positions in secondary education. For instance 2.3% of teaching positions are vacant at the secondary level in the Netherlands, compared to 2.8% at primary level, while the rates are 0.2% at both primary and secondary levels in Japan. Bulgaria, France and Korea also report vacancy rates below 0.5% across both levels, suggesting more balanced staffing – though this may not fully capture regional or subject-specific imbalances. These cross-country differences underscore the need for tailored workforce policies that reflect the specific staffing challenges at each level of education (Table D8.3).

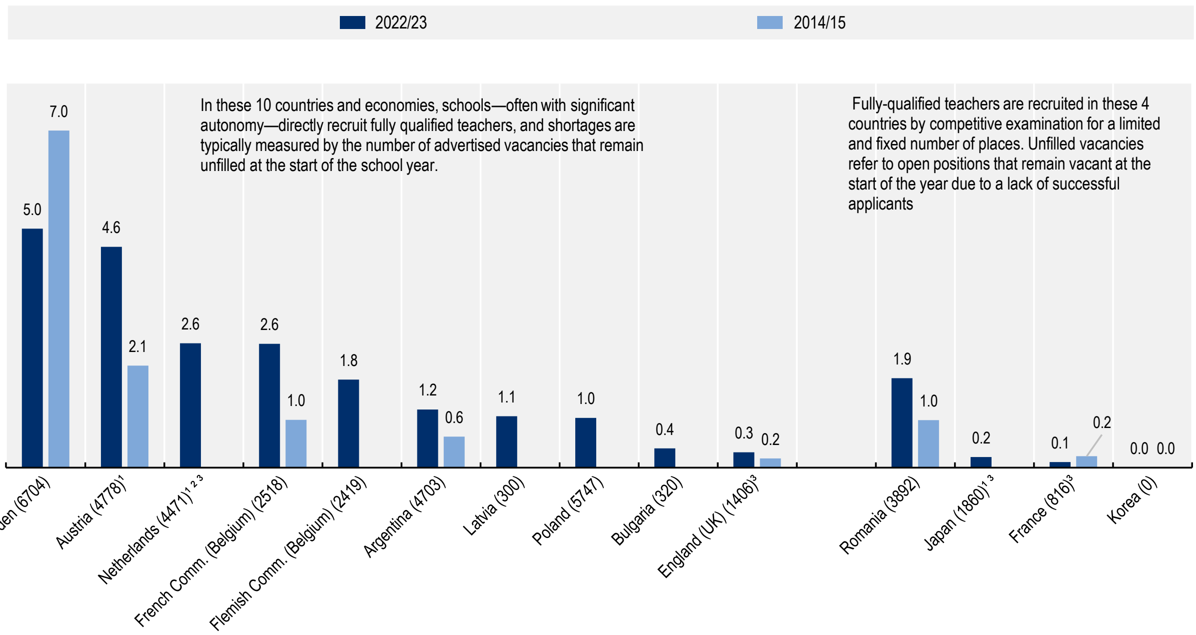
Beyond cross-sectional differences, longitudinal data indicate staffing pressures are growing. In five of the seven countries with available data, the percentage of unfilled vacancies relative to all teaching positions has increased between 2013/14 and 2022/23. This suggests that shortages may be worsening over time, requiring sustained attention from policy makers (Table D8.3).

A deeper understanding of teacher supply challenges emerges when unfilled vacancies are compared with the number of teacher training graduates from the previous year. For example, in Austria, the number of unfilled positions in 2022/23 was equivalent to 107% of the prior year's graduates – meaning there were more unfilled vacancies in 2022/23 than the number of graduates who had gained a teaching diploma the year before. Other countries also face a similar shortfall: in Poland, unfilled positions amounted to 94% of the previous year's graduates; in Sweden, 77%; in the French Community of Belgium, 72%; and in the Netherlands, 50%. Even in countries with relatively lower gaps, such as Romania (31%), Latvia (24%), and the Flemish Community of Belgium (41%), the figures suggest a persistent imbalance (Table D8.3). Although these comparisons do not account for all sources of recruitment (e.g. career changers or internationally trained teachers), they highlight the importance of aligning teacher education capacity with projected labour-market needs. Strengthening this alignment will help countries and economies better anticipate and respond to evolving staffing demands.

Taken together, these findings suggest that while shortages do exist, their magnitude is sometimes overstated when not contextualised. Still, they should not mask other pressing staffing issues – such as day-to-day teacher absenteeism, mid-year resignations or geographical disparities in teacher allocation – which are not captured by this indicator but may have an equally significant impact on teaching continuity and education quality. Continued monitoring is essential, particularly in systems or regions under increasing staffing pressure.

Figure D8.4. Vacancies not filled at the start of the school year as a percentage of the total number of teaching positions, whether filled by fully qualified teachers or not (2022/23)

In per cent, full-time and part-time, public institutions, pre-primary to upper secondary education



Note: The number in parentheses refers to the number of vacancies not filled by fully qualified teachers in pre-primary, primary and secondary education in 2022/23.
1. Excluding pre-primary education in Austria and Japan. Excluding upper secondary vocational education in the Netherlands.
2. Expressed in full-time equivalents. Excluding hidden shortages, i.e. positions that were filled in undesired ways (6 781 positions in primary education and 2 230 in secondary education).
3. Reference year differs from 2022/23.
For data, see Table D8.3. For a link to download the data, see Tables and Notes section.

Box D8.2. Teachers' qualification levels in primary education

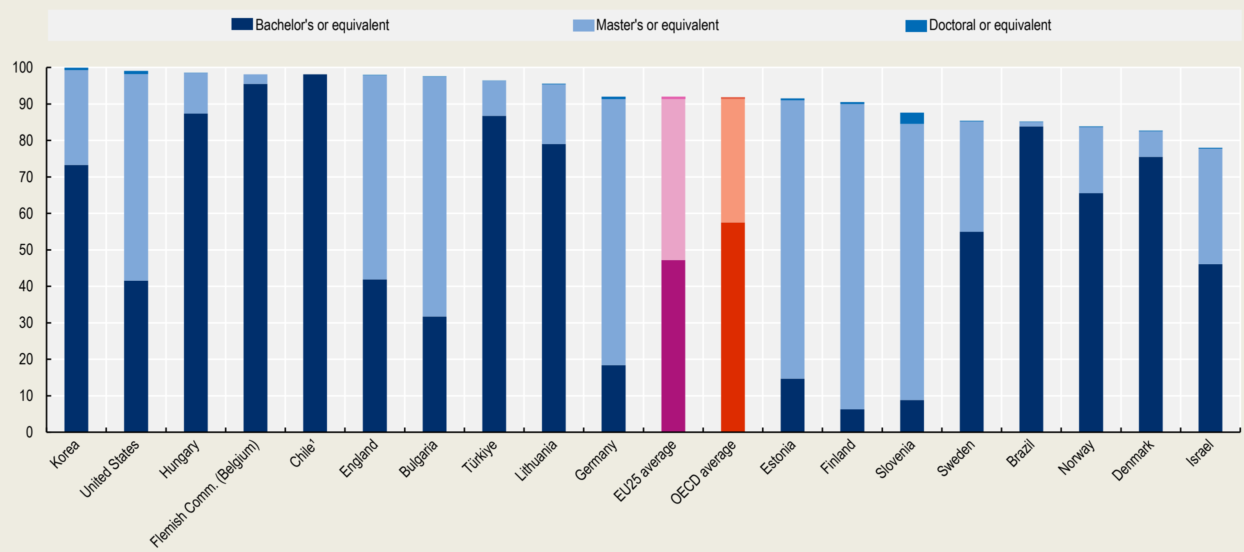
The teaching workforce is highly heterogeneous in terms of qualifications. Although the majority of countries require at least a bachelor's degree for teaching at primary levels, the actual workforce composition includes a mix of attainment, ranging from upper secondary to master's degrees and even doctoral or equivalent credentials (Figure D8.5). Similarly, in upper secondary education, a master's degree is increasingly becoming the minimum qualification requirement, although significant cross-country differences remain. However, this variation may result in uneven qualification levels among teachers across schools and education levels.

In all countries and economies with available data except Korea, at least a small proportion of primary teachers do not even hold a bachelor's degree. This share represents less than 5% of primary teachers in half (9 out of 18) but reaches over 14% of primary teachers in Brazil, Denmark, Israel, Norway and Sweden. In Estonia, Finland, Slovenia and Sweden, where a master's degree is the minimum requirement for teaching at primary levels, more than 15% of the teaching workforce still only hold a bachelor's degree or below. In Bulgaria, England (United Kingdom), Israel and Korea, where a bachelor's degree is the legal requirement for primary teachers, a significant proportion of primary teachers, over 25%, nonetheless hold a master's degree or higher (Figure D8.5).

The diversity in qualification levels can be attributed to several factors. In some countries and economies, qualification requirements have been gradually upgraded over time. For example, Norway transitioned from requiring a bachelor's degree and practical experience to mandating a master's degree for all teaching levels from 2017 onward (Government of Norway, 2018[8]). However, many teachers entered the profession under earlier qualification standards, contributing to the current variation in qualifications. In other cases, the presence of underqualified teachers may reflect efforts to fill vacancies, especially in hard-to-staff schools or regions, where temporary exceptions are made to qualification rules.

Figure D8.5. Share of teachers in primary education with qualifications at or above a bachelor's or equivalent degree (2023)

In per cent, full-time and part-time, public and private institutions



Note: the scope covers all classroom teachers, with no distinction between fully and non-fully qualified teachers.
1. Bachelor's or equivalent programmes includes both master's and doctoral or equivalent programmes.
For data, see Sources section. For a link to download the data, see Tables and Notes section.

To address the challenges posed by qualification disparities, continuous professional development programmes that provide opportunities for learning and upskilling can help promote greater equity in teaching, even within a workforce that continues to reflect mixed qualification levels.

Amid these trends, there is no clear international consensus on the optimal level of education for teachers. Whether a bachelor's or master's degree is required, or what specific content and competencies should be prioritised in teacher preparation, remains a subject of debate across countries.

Teachers leaving the profession

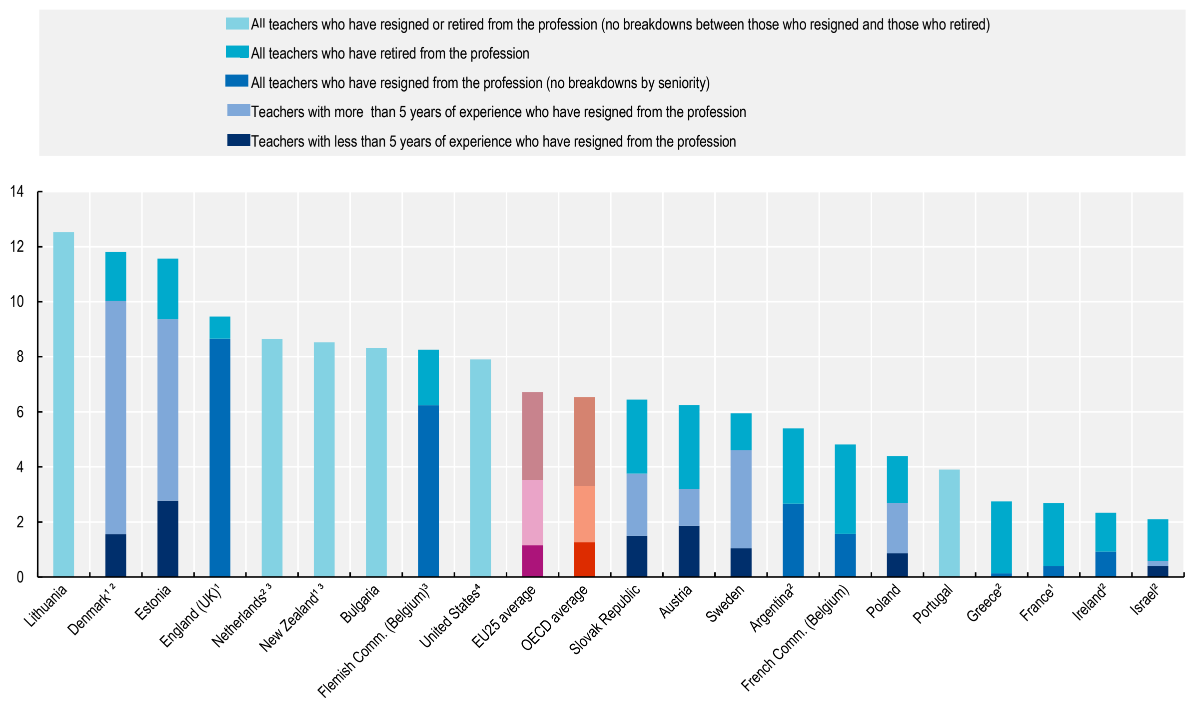
Like the other indicators, teacher attrition is closely linked to teacher shortages and poses a major challenge to the long-term sustainability of education systems. High attrition rates – defined as the permanent departure of fully qualified teachers from the profession within a given year, including both resignations and retirements – can undermine the stability of school staffing and disrupt continuity in instruction, and erode institutional knowledge (see *Definitions* section below).

Across 19 OECD countries and economies with available data, on average 6.5% of fully qualified teachers from pre-primary to upper secondary education left the profession in 2022/23. Attrition rates vary significantly, from below 3%

in France, Greece, Ireland and Israel to over 10% in Denmark, Estonia and Lithuania (Figure D8.6). Attrition rates are slightly higher in pre-primary education (7.3%) and relatively similar in primary (5.8%) and secondary education (5.9%). Over the past decade, rates have remained relatively stable in most countries and economies. However, a few countries have seen notable changes. In Austria and Estonia, the share of fully qualified teachers leaving the profession increased by more than 2 percentage points between 2013/14 and 2022/23, raising growing concerns around workforce sustainability. In contrast, the attrition rate in Denmark declined by a similar margin over that period (Table D8.4).

Figure D8.6. Share of fully qualified teachers who left the profession by resigning or retiring in pre-primary, primary and secondary education (2022/23)

In per cent, full-time and part-time, public institutions



1. Reference year differs from 2022/23.
2. Only primary education in Argentina. Excluding pre-primary education in Greece and Ireland. Excluding upper secondary education in Denmark and Israel. Excluding upper secondary vocational education in the Netherlands.
3. Includes non-fully qualified teachers.
4. Includes teachers who left the profession because they were appointed to other positions in the education sector.
Countries are ranked in descending order of the share of resignations among fully qualified teachers who left the profession in pre-primary, primary, and secondary education
For data, see Table D8.4. For a link to download the data, see Tables and Notes section.

The 2022/23 data reveal striking differences across countries and economies in the reasons for teachers leaving the profession. In several countries, attrition form pre-primary to upper secondary education is primarily driven by resignations rather than retirements, showing potential issues with working conditions, job satisfaction, or career progression. In Denmark, England (United Kingdom) and Estonia, over 80% of fully qualified teachers who left the profession in 2022/23 resigned rather than retired. These figures contrast sharply with Argentina (for primary education), France, the French Community of Belgium, Greece, Ireland and Israel, where retirements account for more than 50% of teacher departures. On average across OECD countries, about half (51%) of fully qualified teachers who left the profession resigned, underscoring the importance of policies focused not only on recruitment but also on improving teacher retention. However, although high attrition can strain education systems, very low turnover may also pose challenges, particularly if it limits renewal. These dynamics highlight the need for balanced policies that support the retention of teachers, while allowing for an appropriate degree of professional mobility (Figure D8.6 and Table D8.4).

It is also notable that a substantial share of teachers who resign are in the early stages of their careers. In the seven OECD countries that provided data on teacher seniority, between 16% and 68% of the fully qualified teachers who resigned in 2022/23 had less than five years of experience. The proportions are particularly high in Austria and in Israel, where nearly 58% and 68% of resigning teachers, respectively, were early-career, followed by the Slovak Republic (40%), Poland (32%) and Estonia (30%). Even in the countries with comparatively lower rates, Sweden (23%) and Denmark (16%), early-career attrition remains an important trend to monitor, although in most countries there are pathways for teachers to return to the profession if they wish. On average across these OECD countries, one in three resigning teachers (34%) had under five years of experience. This trend highlights the importance of reinforcing early-career support mechanisms – such as mentoring, induction programmes and professional development opportunities – to reduce early attrition, strengthen workforce stability and maximise the return on investment in initial teacher education (OECD, 2022[6]).

Cultural and structural differences in employment practices could help explain the variance in job tenure and associated turnover rates between countries and economies. For instance, in New Zealand, fewer than 25% of workers in all sectors remain in the same job for more than ten years, compared to over 50% in Greece. Similarly, Denmark and England (United Kingdom) exhibit high labour-market flexibility, with approximately 30% of employees changing jobs annually in the private sector – a notably higher rate than for instance in Sweden. This wider culture of greater career mobility can contribute to increased turnover in teaching and partly explain why the percentage of teachers leaving the profession is above the OECD average in these countries and economies. In contrast, Austria, France and Greece have more rigid labour markets, with longer job tenures and stronger employment protections, leading to lower turnover rates. On average across OECD countries, around 35% of workers stay in the same job for over ten years, while the EU25 average stands at approximately 40% (OECD, 2025[9]).

In response to growing concerns about teacher shortages and attrition, several OECD countries have adopted targeted policy measures aimed at improving recruitment and retention. New Zealand has launched a comprehensive Teacher Supply Package, which combines financial incentives, structured induction support and efforts to attract overseas teachers. As part of this initiative, eligible returning and international teachers can access an overseas relocation grant of up to NZD 10 000 to help cover the costs of relocation, including teacher registration, temporary accommodation and travel for immediate family members (Government of New Zealand, 2025[10]). Lithuania, facing an ageing teaching workforce and difficulty attracting new educators, has introduced the Education Development Programme 2021-30, which focuses on improving the attractiveness of the profession by enhancing working conditions, strengthening professional support and creating clearer career pathways to reduce attrition (Eurydice, 2023[11]). Box D8.3 details insights from the *Education Policy Outlook* into country policies to attract and retain teachers (OECD, 2024[12]).

Although resignation rates may appear moderate in some countries and economies, they do not capture the full extent of instability within the teaching workforce. High levels of absenteeism, even without a formal resignation, can disrupt instruction and increase reliance on temporary staff. Effective monitoring of both resignations and absences is essential for understanding the true scope of staffing challenges and their impact on student learning.

Box D8.3. Policy priorities to enhance teaching attractiveness: Insights from the OECD Education Policy Outlook 2024

The *Education Policy Outlook 2024: Reshaping Teaching Into a Thriving Profession (from ABCs to AI)* (OECD, 2024[12]) looked at policies to attract and retain teachers, based on responses from 33 education systems to the Education Policy Outlook National Survey for Comparative Policy Analysis which were collected mainly between April and May 2024. This survey is part of the OECD's efforts to gather comparative data and insights on education policies across OECD and partner countries, facilitating analysis and dialogue on policy developments and challenges. The respondents were the education ministries or relevant government authorities of participating countries and jurisdictions. These entities provide official responses through designated national co-ordinators or representatives

The survey responses showed a stronger focus on attracting teachers than retaining them, with Brazil the only system prioritising teacher retention over attraction. At least 70% of respondents prioritised raising the profession's status, enhancing institutional leadership and diversifying pathways into teaching in order to attract new teachers. Attracting new types of candidate into teaching received less emphasis, considered important in 64% of systems (Figure D8.7).

Policy priorities also vary across education levels. For early childhood education and care, improving the societal value of the profession and offering more flexible entry routes are most frequently cited. In secondary education, where shortages are often more acute and subject specific, the need to attract candidates from more diverse backgrounds was given a greater emphasis. These differentiated approaches suggest that although teacher shortages are a common challenge, the solutions must be tailored to specific workforce needs across levels and contexts (OECD, 2024[12]).

Figure D8.7. Priorities for attracting teachers by policy area for 2025-30 (2024)

Percentage of education systems specifying policy areas of "high" or "very high" importance in at least one level of education

Improving the status of the teaching profession and institutional leadership	Opening up diverse pathways into the teaching profession	Attracting new types of candidates to the teaching profession and institutional leadership	Teacher attraction policies are less of a priority
26 education systems (or 79%)	23 education systems (or 70%)	21 education systems (or 64%)	1 education system (or 3%)
Chili, Colombia, Czechia, Germany, Finland, France, Greece, Hungary, Ireland, Japan, Korea, Latvia, Mexico, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Türkiye, Belgium(Fl., De.), England (UK), Kazakhstan, Peru and Romania	Austria, Germany, France, Greece, Hungary, Iceland, Japan, Korea, Lithuania, Luxembourg, Latvia , Mexico, Netherlands, Norway, Poland, Slovenia, Türkiye, Belgium (Fr., Fl., De.), England (UK), Croatia and Peru	Austria, Colombia, Germany, Greece, Hungary, Iceland, Korea, Lithuania, Luxembourg, Latvia, Mexico, Netherlands, Norway, Portugal, Belgium(Fl., Fr.), England (UK), Croatia Kazakhstan, Peru and Romania	Brazil

Note: A policy area of "high importance" is considered a priority for the allocation of resources and strategic focus and is expected to have a notable impact on attracting teachers. A policy area of "very high importance" is considered an urgent priority requiring immediate attention and substantial resources, with significant potential to positively influence attracting teachers.
Source: OECD (2024), Education Policy Outlook National Survey for Comparative Policy Analysis 2024. Chapter 2 - Figure 2.1.

Definitions

Centralised/decentralised system: Having a centralised system for certifying new teachers and assigning them to schools means that this process is managed at central (national) government level. In a centralised system, the national government is responsible for certifying teachers and assigning them to schools, whereas in a decentralised system, these responsibilities are assumed by regional authorities (lander, districts, states etc.) or local ones (schools, municipalities, etc.).

Competitive examinations refer to examinations organised by local, regional or national authorities in order to select the applicants with the best results to fill a limited and fixed number of places for student teachers and/or for teachers in the public education system.

Fully qualified teachers refer to teachers who have fulfilled all the training and administrative requirements for teaching at a given grade and subject, according to the formal policy of a country. The administrative requirements can include formal qualifications and attainment level, specific pedagogical training or practical experience, succeeding in competitive examinations, and the successful completion of a probation period or induction programme.

Non-fully qualified teachers refer to teachers entering the profession through alternative pathways. In most countries, they either have the required academic qualifications but lack mandatory certification or training, have completed training but lack the academic qualifications, or lack both. In a few cases, the term also includes fully qualified teachers teaching in a different subject or education level than they were trained for.

Fully qualified teachers who left the profession: A leaving teacher refers to any teacher who is leaving the profession in the reference year and who is not expected to come back the year after (i.e. someone who is permanently leaving the profession). Teachers who leave due to resignation or retirement are counted as leaving teachers. Teachers temporarily absent from work (e.g. due to illness, injury, maternity or parental leave, vacation, or early retirement leave) are not considered leaving teachers. In most countries, however, teachers who leave the profession may still return after more than one year.

Second-career teachers are individuals who transition into teaching from a different profession or career.

Methodology

In Table D8.3, teacher shortages are estimated by the number of unfilled teaching vacancies at the start of the school year 2022/23. In countries with competitive examinations, unfilled vacancies refer to the number of open positions that remain vacant for the year 2022/23 due to a lack of successful applicants to the competitive examination conducted at the end of the 2021/22 academic year. In other countries, estimates are based on vacancies advertised – often directly by schools – that could not be filled with fully qualified teachers, leading institutions to hire non-fully qualified teachers or rely on temporary arrangements. In a few cases, unfilled vacancies are approximated by counting non-fully qualified teachers in the current year who were not listed in the teacher register the previous year. This chapter provides an international overview, but it is important to note that teacher shortages can be more pronounced in certain regions or in rural areas. Additionally, a shortage at the start of the year does not necessarily imply that the situation will not improve as the year progresses. In most countries, the majority of unfilled positions are filled shortly after the school year begins, often by non-fully qualified teachers. It should also be noted that this chapter does not cover teacher absenteeism, which is an important issue in many countries and can lead to shortages for part of the academic year.

Sources

Data on teachers by age (Table D8.1) refer to the academic year 2022/23 and are based on the UNESCO-UIS/OECD/EUROSTAT data collection on education statistics administered by the OECD in 2024. They cover both public and private institutions. Data included in Figure D8.5 come from the 2024 UNESCO-UIS/OECD/EUROSTAT TEACH Questionnaire, which was included as an ad hoc module in the 2024 UOE data collection.

Data included in Table D8.2, Table D8.3and Table D8.4 refer to the academic year 2022/23 and are based on the INES special data collection on teacher shortages administered by the OECD in 2024. Qualitative information from this ad hoc survey has been collected in an additional ad-hoc survey submitted to countries in 2025. These questionnaires cover public institutions from pre-primary to upper secondary education. The scope of the questionnaire is focused on initial education and does not include adult education (second chance education or any other form of lifelong learning activities) or special education programmes and schools for children with disabilities.

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Tables and Notes

Chapter D8 Tables

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StatLink https://stat.link/6a2xcz

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table D8.1 Trends in the age distribution of teachers, by level of education (2013 and 2023)

Note: The scope covers all classroom teachers, with no distinction between fully and non-fully qualified teachers.

1. 'Primary' includes pre-primary and lower secondary education, while 'secondary' refers only to upper secondary education.
2. Year of reference differs from 2013: 2014 for Bulgaria, Croatia, Denmark and Türkiye,; 2016 for Costa Rica and France; and 2018 for Colombia.
3. Year of reference differs from 2023: 2022 for Colombia and Peru.
4. Pre-primary education also includes early childhood education development programmes.
5. 'Secondary' includes post-secondary non-tertiary education.
6. 'Primary includes lower secondary education and 'Secondary' refers only to upper secondary education.

Table D8.2 Share of non-fully qualified teachers, by level of education (2014/15 and 2022/23)

Note: Unlike fully qualified teachers who meet all training and administrative requirements to teach a given subject, non-fully qualified teachers enter the profession through alternative pathways. In most countries, they either have the required academic qualifications but lack mandatory certification or training, have completed training but lack the academic qualifications, or lack both. In a few cases, the term also includes fully qualified teachers teaching in a different subject or education level than they were trained for.

1. Primary and lower secondary education combined in Denmark, Iceland and Slovenia. Data for pre-primary education (ISCED 02) include early childhood development programmes (ISCED 01) in Iceland. Total

excludes upper secondary education in Denmark and Slovenia. Excluding upper secondary education in Israel and upper secondary vocational education in the Netherlands.

2. Reference year differs from 2022/23: academic year 2021/22 for Denmark, England (UK), France and Japan .
3. Expressed in full-time equivalents, as a large majority of teachers in the Netherlands and non-fully qualified teachers in Denmark are working part time.
4. Reference year differs from 2014/15: academic year 2015/16 for France; and 2018/19 for Lithuania and Sweden.

Table D8.3 Unfilled teaching vacancies at the start of the year and prior-year teaching graduates, by level of education (2014/15 and 2022/23)

Note: The methods for estimating the number of unfilled teaching vacancies at the start of the school year vary across countries. In countries with competitive examinations (Column 1), unfilled vacancies refer to open positions that remain vacant after the exam due to a lack of successful applicants. In other countries, estimates are based on vacancies advertised - often directly by schools - that could not be filled with fully qualified teachers, leading institutions to hire less-qualified staff or rely on temporary arrangements. In a few cases (e.g. the French Community of Belgium and Sweden), unfilled vacancies are approximated by counting non-fully qualified teachers in the current year who were not listed in the teacher register the previous year. In most countries, the majority of unfilled positions are filled shortly after the school year begins, often by non-fully qualified teachers.

1. In countries without a competitive examination, this refers to the share of students graduating with a teaching diploma at the end of 2021/22 as a percentage of those enrolled in the final year of teacher education programmes in 2021/22. In countries with a competitive examination, this refers to the share of successful applicants in 2021/22 as a percentage of all applicants who took the exam in 2021/22.
2. In countries without a competitive examination, prior-year teaching graduates refers to the students graduating with a teaching diploma in the reference year. In countries with a competitive examination, it refers to the successful candidates among all applicants who took the exam in the reference year.
3. Excluding pre-primary education in Austria and Japan. Pre-primary and primary education are combined in England (UK), Flemish Comm. (Belgium), France and the Netherlands. Excluding upper secondary education in Israel and upper secondary vocational education in the Netherlands.
4. Reference year: academic year 2021/22 for England (UK), France and Japan ; academic year 2023/2024 for secondary education in the Netherlands. Reference year for trends: academic year 2015/16 for France.
5. Expressed in full-time equivalents. Excluding hidden shortages, i.e. positions that were filled in undesired ways (6 781 positions in primary education and 2 230 in secondary education).

Table D8.4 Share of fully qualified teachers who left the profession by resigning or retiring, by level of education (2022/23)

Note: Columns with data on pre-primary education are available for consultation on line.

1. Primary and lower secondary education combined and excluding upper secondary education in Denmark. Excluding upper secondary education in Israel and upper secondary vocational education in the Netherlands. Data for pre-primary education (ISCED 02) include early childhood development programmes (ISCED 01) in Iceland.
2. Reference year differs from 2022/23: academic year 2021/22 for Denmark, France and England (UK) and New Zealand.
3. Reference year differs from 2014/15: academic year 2012/13 for the United States; 2015/16 for France; and 2018/19 for Lithuania.
4. Includes non-fully qualified teachers.

5. Includes teachers who left the profession because they were appointed to other positions in the education sector.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

Table D8.1. Trends in the age distribution of teachers, by level of education (2013 and 2023)

Full-time and part-time, public and private institutions

	Pre-primary				Primary				Secondary			
	< 30 years		>= 50 years		< 30 years		>= 50 years		< 30 years		>= 50 years	
	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023	2013	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	26	29	22	22	12	19	37	33	7	13	46	40
Belgium	25	15	15	30	23	19	22	25	17	13	30	31
Canada[1]	x(5)	x(6)	x(7)	x(8)	12[d]	10[d]	26[d]	29[d]	12	10	26	29
Chile	21	13	17	21	22	13	28	23	21	14	31	24
Colombia[2, 3]	29	25	26	27	12	11	38	41	10	9	37	38
Costa Rica[2]	5	6	32	27	5	7	31	26	9	7	24	20
Czechia	14	17	37	39	9	8	31	46	7	7	39	44
Denmark[2]	m	11	m	38	12	19	33	33	9	13	36	37
Estonia[4, 5]	12	9	39	47	9	10	38	49	8[d]	7[d]	50[d]	53[d]
Finland	16	16	27	33	9	13	30	36	7	9	37	43
France[2]	11	11	25	32	12	11	22	27	9	9	31	39
Germany	21	22	28	29	7	8	45	37	6	6	49	39
Greece	10	8	12	35	0	11	49	47	1	1	39	56
Hungary	7	15	38	41	7	8	34	47	6	5	35	49
Iceland[5]	30	37	22	20	7	7	36	39	m	5[d]	m	46[d]
Ireland	m	m	m	m	18	13	22	16	m	14	m	24
Israel	10	13	27	25	16	15	21	24	10	9	32	34
Italy[5]	0	4	57	54	0	5	57	57	0[d]	5[d]	69[d]	52[d]
Japan[5]	58	45	9	14	15	23	31	25	11[d]	16[d]	31[d]	33[d]
Korea	52	40	2	9	21	16	16	17	13	13	26	25
Latvia	15	11	28	42	9	9	36	50	7	7	46	57
Lithuania	8	10	41	47	4	6	39	57	7	4	44	59
Luxembourg	28	17	14	16	25	22	19	16	15	11	25	26
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	19	16	35	30	18	15	36	31	12	14	46	37
New Zealand	25	25	25	25	12	13	39	37	10	12	43	41
Norway	23	19	14	20	12	21	33	29	9	14	40	37
Poland	23	14	20	24	10	5	23	44	9	4	26	40
Portugal[5]	6	3	31	55	2	3	34	50	2	3[d]	31	56[d]
Slovak Republic	13	16	37	34	9	9	27	33	12	7	38	38
Slovenia[6]	21	12	22	22	7	10	27	32	5	7	33	49
Spain	12	9	30	28	10	8	33	30	3	6	34	39
Sweden	m	9	m	38	6	9	39	37	6	6	42	43
Switzerland[5]	18	16	29	31	16	20	35	29	9[d]	9[d]	38[d]	37[d]
Türkiye[2]	m	m	m	m	m	17	m	21	25	16	9	13
United Kingdom	28	18	19	22	29	24	16	16	19	19	26	25
United States	16	m	31	m	15	15	31	30	16	12	32	33
OECD average	20	17	26	31	12	13	32	34	10	9	36	38
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	22	13	10	22	17	11	15	27	18	12	18	26
Bulgaria[2]	6	9	52	38	3	7	42	49	4	7	48	48
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia[2]	16[d]	19	29[d]	23	x(9)	9	x(11)	37	13[d]	10	30[d]	29
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru[3]	m	13	m	25	m	7	m	42	m	9	m	34
Romania	18	21	35	21	11	12	31	30	13	8	29	32
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	15	14	31	34	10	11	34	38	8	8	39	42
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D8.2. Share of non-fully qualified teachers, by level of education (2014/15 and 2022/23)

Full-time and part-time, public institutions

	Pre-primary		Primary		Secondary		Total	
	2022/23	2014/15	2022/23	2014/15	2022/23	2014/15	2022/23	2014/15
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	m	m	m	m	m	m	m	m
Austria	m	m	5.3	1.2	6.0	3.1	5.7	2.4
Costa Rica	9.7	12.4	6.0	6.9	2.5	3.8	5.0	6.3
Denmark[1, 2, 3]	24.5	15.4	18.1[d]	15.2[d]	m	m	20.8	15.3
Estonia	14.7	17.6	x(5)	x(6)	19.1[d]	7.6[d]	17.8	13.9
France[2, 4]	x(3)	x(4)	1.3[d]	0.4[d]	9.1	7.7	5.4	4.3
Greece	m	m	m	m	m	m	m	m
Hungary	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Iceland[1]	78.2[d]	71.5[d]	16.9[d]	4.5[d]	17.5	16.3	45.1	35.3
Ireland	m	m	m	m	m	m	m	m
Israel[1]	5.5	m	7.9	m	6.0	m	7.0	m
Japan[2]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Korea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Latvia	15.4	11.5	m	m	m	m	m	m
Lithuania[4]	19.4	16.2	7.5	6.0	5.5	4.9	7.2	6.0
Netherlands[1, 3]	x(3)	m	1.9[d]	m	3.9	6.2	2.7	m
New Zealand	m	m	m	m	m	m	m	m
Norway	m	m	m	m	m	m	m	m
Poland	0.1	m	0.1	m	0.6	m	0.4	
Portugal	5.9	0.8	5.0	0.9	7.5	2.1	6.5	1.6
Slovak Republic	2.2	m	2.9	m	1.9	m	2.2	m
Slovenia[1]	m	m	3.1[d]	1.4[d]	m	m	3.1	m
Spain	m	m	m	m	m	m	m	m
Sweden[4]	11.8	16.2	16.3	20.8	21.6	25.5	18.7	22.8
Switzerland	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m
United States	m	m	m	m	m	m	m	m
Other economies								
Flemish Comm. (Belgium)	3.2	m	2.7	m	6.9	m	4.8	m
French Comm. (Belgium)	5.8	0.4	8.8	3.0	16.9	9.7	12.7	6.2
England (UK)[2]	1.6	2.9	1.8	1.9	2.8	3.7	2.3	2.8
OECD average	11.6	12.7	5.6	4.4	7.1	6.5	8.4	8.4
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria	4.3	0.3	3.0	1.2	3.8	2.1	3.7	1.4
Romania	2.6	2.5	1.5	1.5	2.0	1.4	2.0	1.6
EU25 average	8.5	8.1	5.2	4.7	7.5	6.4	7.1	6.9
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D8.3. Unfilled teaching vacancies at the start of the year and prior-year teaching graduates, by level of education (2014/15 and 2022/23)

Full-time and part-time, public institutions

		Primary				Secondary			
			Vacancies not filled at the start of the 2022/23 school year ...				Vacancies not filled at the start of the 2022/23 school year ...		
	Competitive examination for a limited and fixed number of places for certifying new teachers (Yes or No)	Share of successful teaching candidates in 2021/22[1]	... in absolute numbers	...as a percentage of the total number of teaching positions (whether filled by fully qualified teachers or not)	... as a percentage of the number of prior-year teaching graduates[2]	Share of successful teaching candidates in 2021/22[1]	... in absolute numbers	...as a percentage of the total number of teaching positions (whether filled by fully qualified teachers or not)	... as a percentage of the number of prior-year teaching graduates[2]
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Australia	No	m	m	m	m	m	m	m	m
Austria[3]	No	m	1 409	3.8	99	m	3 369	5.1	110
Costa Rica	No	m	m	m	m	m	m	m	m
Denmark	No	m	m	m	m	m	m	m	m
Estonia	No	m	m	m	m	m	m	m	m
France[3, 4]	Yes	28[d]	157[d]	0.0[d]	2[d]	24	659	0.2	7
Greece	No	m	m	m	m	m	m	m	m
Hungary	No	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m	m
Ireland	No	m	m	m	m	m	m	m	m
Israel[3]	No	m	m	m	m	m	m	m	m
Japan[3, 4]	Yes	38	979	0.2	6	20	881	0.2	6
Korea	Yes	49	0	0.0	0	12	0	0.0	0
Latvia	No	m	m	m	m	m	m	m	m
Lithuania	No	m	m	m	m	m	m	m	m
Netherlands[3, 4, 5]	No	m	2 940[d]	2.8[d]	76[d]	m	1 531	2.3	30
New Zealand	No	m	m	m	m	m	m	m	m
Norway	No	m	m	m	m	m	m	m	m
Poland	No	m	m	m	m	m	m	m	m
Portugal	No	m	m	m	m	m	m	m	m
Slovak Republic	No	m	m	m	m	m	m	m	m
Slovenia	No	m	m	m	m	m	m	m	m
Spain	Yes	m	m	m	m	m	m	m	m
Sweden	No	m	2 972	4.7	141	m	3 398	5.3	89
Switzerland	No	m	m	m	m	m	m	m	m
Türkiye	Yes	m	m	m	m	m	m	m	m
United States	No	m	m	m	m	m	m	m	m
Other economies									
Flemish Comm. (Belgium)[3]	No	86[d]	895[d]	1.3[d]	44[d]	80	1 524	2.4	39
French Comm. (Belgium)	No	m	590	1.8	55	m	1 571	3.1	82
England (UK)[3, 4]	No	90[d]	635[d]	0.3[d]	3[d]	92	771	0.4	5
OECD average	m	m	m	m	m	m	m	m	m
Partner and/or accession countries									
Argentina	No	m	3 259	1.3	m	m	1 091	1.7	m
Brazil	Yes	m	m	m	m	m	m	m	m
Bulgaria	No	m	36	0.2	m	m	192	0.5	m
Romania	Yes	59	306	0.7	13	44	2 572	1.9	41
EU25 average	m	m	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m	m	m

	From pre-primary to upper secondary				From pre-primary to upper secondary			
		Vacancies not filled at the start of the 2022/23 school year ...				Vacancies not filled at the start of the 2014/15 school year ...		
	Share of successful teaching candidates in 2021/22[1]	... in absolute numbers	...as a percentage of the total number of teaching positions (whether filled by fully qualified teachers or not)	... as a percentage of the number of prior-year teaching graduates[2]	Share of successful teaching candidates in 2013/14[1]	... in absolute numbers	...as a percentage of the total number of teaching positions (whether filled by fully qualified teachers or not)	... as a percentage of the number of prior-year teaching graduates[2]
OECD countries	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Australia	m	m	m	m	m	m	m	m
Austria[3]	m	4 778	4.6	107	m	2 106	2.1	64
Costa Rica	m	m	m	m	m	m	m	m
Denmark	m	m	m	m	m	m	m	m
Estonia	m	m	m	m	m	m	m	m
France[3, 4]	26	816	0.1	4	29	1 676	0.2	7
Greece	m	m	m	m	m	m	m	m
Hungary	m	m	m	m	m	m	m	m
Iceland	m	m	m	m	m	m	m	m
Ireland	m	m	m	m	m	m	m	m
Israel[3]	m	m	m	m	m	m	m	m
Japan[3, 4]	27	1 860	0.2	6	17	m	m	m
Korea	15	0	0.0	0	22	0	0.0	0
Latvia	27	300	1.1	24	m	m	m	m
Lithuania	m	m	m	m	m	m	m	m
Netherlands[3, 4, 5]		4 471	2.6	50	m	m	m	m
New Zealand	m	m	m	m	m	m	m	m
Norway	m	m	m	m	m	m	m	m
Poland	84	5 747	1.0	94	m	m	m	m
Portugal	30	m	m	m	m	m	m	m
Slovak Republic	m	m	m	m	m	m	m	m
Slovenia	m	m	m	m	m	m	m	m
Spain	m	m	m	m	m	m	m	m
Sweden	m	6 704	5.0	77	m	8 980	7.0	97
Switzerland	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m
United States	m	m	m	m	m	m	m	m
Other economies								
Flemish Comm. (Belgium)[3]	81	2 419	1.831	41	m	383	m	6
French Comm. (Belgium)	m	2 518	2.6	72	m	936	1.0	26
England (UK)[3, 4]	91	1 406	0.3	4	91	814	0.2	3
OECD average	m	m	m	m	m	m	m	m
Partner and/or accession countries								
Argentina		4 703	1.2	m	m	2 173	0.6	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria	91	320	0.4	4	m	m	m	m
Romania	51	3 892	1.9	31	50	2 068	1.0	16
EU25 average	m	m	m	m	m	m	m	m
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Table D8.4. Share of fully qualified teachers who left the profession by resigning or retiring, by level of education (2022/23)

Full-time and part-time, public institutions

	2022/23							
	Primary				Secondary			
	Percentage of fully qualified teachers who left the profession	Of which: Resigned from the profession	Of which: Retired from the profession	Fully qualified teachers with less than 5 years of experience who left the profession as a percentage of all fully qualified teachers who resigned	Percentage of fully qualified teachers who left the profession	Of which: Resigned from the profession	Of which: Retired from the profession	Fully qualified teachers with less than 5 years of experience who left the profession as a percentage of all fully qualified teachers who resigned
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	m	m	m	m	m	m	m	m
Austria	5.8	63	37	52	6.5	45	55	63
Costa Rica	m	m	m	m	m	m	m	m
Denmark[1, 2]	12.0[d]	85[d]	15[d]	18[d]	m	m	m	m
Estonia	x(5)	x(6)	x(7)	x(8)	11[d]	80[d]	20[d]	33[d]
France[2, 3]	2.7[d]	17[d]	83[d]	m	2.6	13	87	m
Greece	2.1	5	95	m	3.7	4	96	m
Hungary	m	m	m	m	m	m	m	m
Iceland[1]	11.5	m	m	m	m	m	m	m
Ireland	2.5	25	75	m	5.0	53	47	m
Israel[1]	2.0	29	71	66	2.0	31	69	68
Japan	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m
Lithuania[3]	m	m	m	m	m	m	m	m
Netherlands[1, 4]	8.1[d]	m	m	m	9.5	m	m	m
New Zealand[2, 4]	8.5	m	m	m	8.6	m	m	m
Norway	m	m	m	m	m	m	m	m
Poland	4.5	57	43	24	4.3	62	38	32
Portugal	3.7	m	m	28	4.0	m	m	49
Slovak Republic	5.3	67	33	38	6.5	57	43	38
Slovenia	m	m	m	m	m	m	m	m
Sweden	5.6	78	22	23	6.1	78	22	20
Switzerland	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m
United States[3, 5]	m	m	m	m	m	m	m	m
United States	No	m	m	m	m	m	m	m
Other economies								
Flemish Comm. (Belgium)[4]	8.4	76	24	m	8.8	76	24	m
French Comm. (Belgium)	4.8	33	67	m	4.8	31	69	m
England (UK)[2]	9.5[d]	m	m	m	9.5	m	m	m
OECD average	5.8	49	51	36	5.9	48	52	43
Partner and/or accession countries								
Argentina	5.4	49	51	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria	7.7	m	m	4	8.4	m	m	29
Romania	m	m	m	m	m	m	m	m
EU25 average	5.7	51	49	27	6.2	50	50	38
G20 average	m	m	m	m	m	m	m	m

	2022/23				2014/15			
	Pre-primary to upper secondary				Pre-primary to upper secondary			
	Percentage of fully qualified teachers who left the profession	Of which: Resigned from the profession	Of which: Retired from the profession	Fully qualified teachers with less than 5 years of experience who left the profession as a percentage of all fully qualified teachers who resigned	Percentage of fully qualified teachers who left the profession	Of which: Resigned from the profession	Of which: Retired from the profession	Fully qualified teachers with less than 5 years of experience who left the profession as a percentage of all fully qualified teachers who resigned
OECD countries	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Australia	m	m	m	m	m	m	m	m
Austria	6.2	51	49	58	3.2	63	37	59
Costa Rica	m	m	m	m	m	m	m	m
Denmark[1, 2]	11.8	85	15	16	13.7	82	18	23
Estonia	11.6	81	19	30	6.8	80	20	38
France[2, 3]	2.7	15	85	m	2.3	6	94	m
Greece	2.7	5	95	m	2.3	12	88	m
Hungary	m	m	m	m	m	m	m	m
Iceland[1]	m	m	m	m	9.7	m	m	m
Ireland	2.3	39	61	m	m	m	m	m
Israel[1]	2.1	28	72	68	m	m	m	m
Japan	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m
Latvia	m	m	m	m	m	m	m	m
Lithuania[3]	12.5	m	m	m	12.4	m	m	m
Netherlands[1, 4]	8.6	m	m	m		m	m	m
New Zealand[2, 4]	8.5	m	m	m	m	m	m	m
Norway	m	m	m	m	m	m	m	m
Poland	4.4	61	39	32	m	m	m	m
Portugal	3.9	m	m	39	m	m	m	m
Slovak Republic	6.4	58	42	40	m	m	m	m
Slovenia	m	m	m	m	m	m	m	m
Sweden	5.9	77	23	23	5.8	91	9	22
Switzerland	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m
United States[3, 5]	7.9	m	m	m	7.7	46	54	7
United States	m	m	m	m	m	m	m	m
Other economies								
Flemish Comm. (Belgium)[4]	8.3	76	24	m	m	m	m	m
French Comm. (Belgium)	4.8	33	67	m	4.9	29	71	m
England (UK)[2]	9.5	91	9	m	10.4	76	24	m
OECD average	6.5	51	49	38	6.9	51	49	30
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m
Bulgaria	8.3	m	m	23	7.4	m	m	20
Romania	m	m	m	m	m	m	m	m
EU25 average	6.7	53	47	32	6.5	52	48	32
G20 average	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Tables and Notes section above.

Annex 1. Characteristics of education systems

Annex 1 Tables

Table X1.1	School year and financial year used for the calculation of indicators, OECD countries
Table X1.2	School year and financial year used for the calculation of indicators, partner and accession countries
Table X1.3	Starting and ending age of students in compulsory education, ages of entitlement to early childhood education and care, and theoretical starting age and duration of education levels (2023)

StatLink https://stat.link/jcx94f

Data Download

To download the data for the figures and tables in this chapter, click StatLink above.

To access further data and/or other education indicators, please visit the OECD Data Explorer: https://data-explorer.oecd.org/.

Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data.

Notes for Tables

Table X1.1. School year and financial year used for the calculation of indicators, OECD countries

No note.

Table X1.2. School year and financial year used for the calculation of indicators, partner and accession countries

No note.

Table X1.3. Starting and ending age of students in compulsory education, ages of entitlement to early childhood education and care, and theoretical starting age and duration of education levels (2023)

Note: The theoretical ages refer to the age of the students at the beginning of the school year except for the ending age of compulsory education which corresponds to the age at which compulsory schooling ends. For example, an ending age of 18 indicates that all students under 18 are legally obliged to participate in education. Since the theoretical ages indicated refer to the beginning of the school year, students may be older than the theoretical ending age at the end of the academic year. See *Definitions and Methodology*.

1. Theoretical starting and ending ages for early childhood development refer to the Flemish Community only.

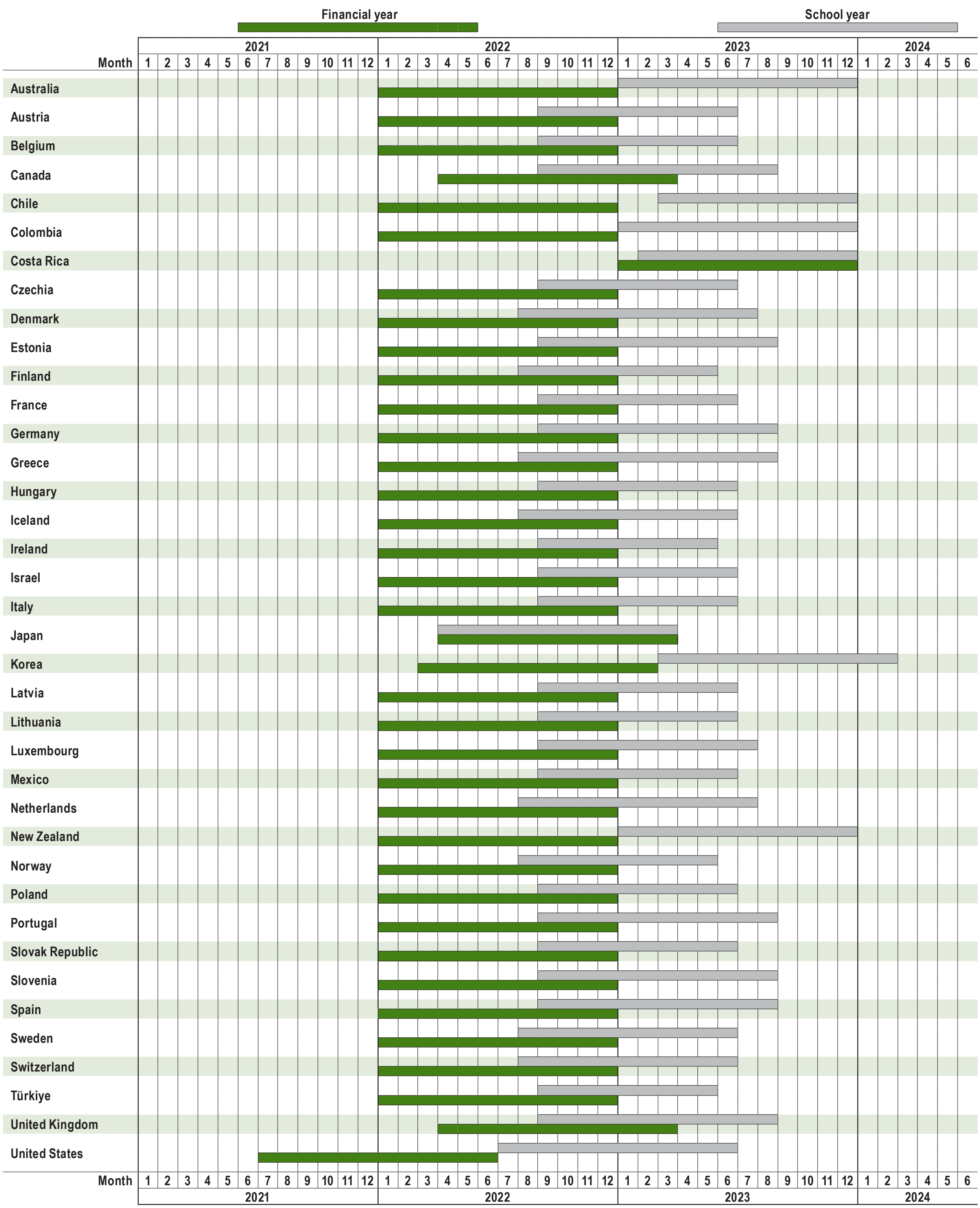
2. The length of study at the secondary level differs in Quebec, with the final grade of secondary schools in the province being Grade 11. For the remaining provinces and territories, the final grade of secondary schools is Grade 12.
3. In 2015, the Basic Education Act was revised and the participation of 6-year-olds in pre-primary education became mandatory. However, this is not encompassed by the Compulsory Education Act, which stipulates that compulsory education usually begins in the year when children turn 7 years old.
4. As of September 2020, 16-18 year-old students are required to train by several means: schooling, apprenticeships, training courses, civic service, and support or social and professional integration measures.
5. In Berlin and Brandenburg, primary education lasts for 6 years. In addition, the duration of lower secondary education varies between 5 and 6 years depending on the qualification aspired and Federal Land. Most programmes leading to the first school leaving certificate last 9 school years, while programmes leading to the intermediate school leaving certificate last 10 school years. There are also differences in the length of schooling up to the Abitur (12 or 13 years). The starting age for upper secondary education also varies and can be 15. In Berlin, upper secondary education at the gymnasium lasts 2 years.
6. Early childhood education integrates early childhood educational development and pre-primary education. There is no lower age limit to enrol, but children are entitled to a place from the year they turn 1 if born January-November and parental leave is also around a year. The theoretical duration of upper secondary vocational programmes may vary from 3 to 4.5 years.

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader's Guide.

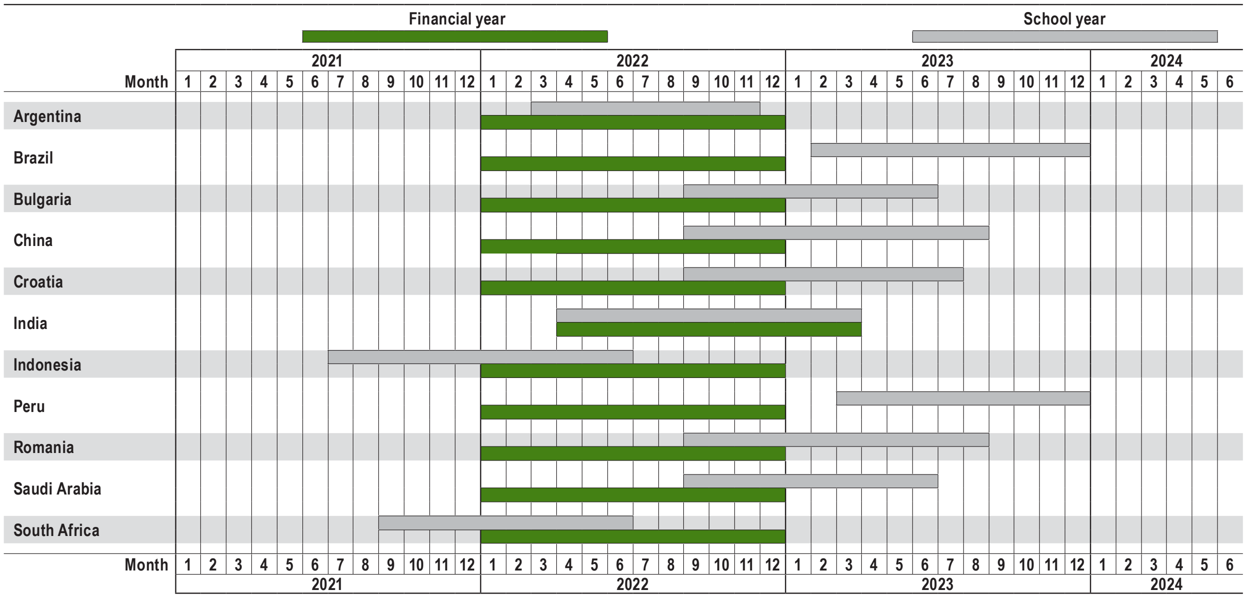
For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)

Table X1.1. School year and financial year used for the calculation of indicators, OECD countries



Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X1.2. School year and financial year used for the calculation of indicators, partner and accession countries



Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X1.3. Starting and ending age of students in compulsory education, ages of entitlement to early childhood education and care, and theoretical starting age and duration of education levels (2023)

Ages refer to the age of the students at the beginning of the school year

	Compulsory education		Entitlements to early childhood education and care		Theoretical starting age and duration: Early childhood educational development		Pre-primary		Primary		Lower secondary		Upper secondary	
	Starting age	Ending age	Starting age of universal entitlement	Starting age of free provision	Starting age	Duration	Starting age	Duration	Starting age	Duration	Starting age	Duration	Starting age	Duration
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Australia	6	17	4	4	0	3	3	2	5	7	12	4	16	2
Austria	5	15	a	5	0	3	3	3	6	4	10	4	14	4
Belgium[1]	5	18	3	0	0	3	2.5	3	6	6	12	2	14	4
Canada[2]	6	16	0	5	0-2	1-3	3-5	1-3	6	6	12	3	15	2-3
Chile	6	18	0.25	4	0.25	3	3	3	6	6	12	2	14	4
Colombia	5	16	5	5	0	3	3	3	6	5	11	4	15	2
Costa Rica	4	17	4	4	0	4	4	2	6	6	12	3	15	2
Czechia	5	15	m	5	a	a	3	3	6	5	11	4	15	4
Denmark	6	16	6	6	0	3	3	3	6	7	13	3	16	3
Estonia	7	16	1.5	7	x(7)	x(8)	0[d]	7[d]	7	6	13	3	16	3
Finland[3]	6	18	0.75	6	0.75	2	3	4	7	6	13	3	16	3
France[4]	3	16	3	3	a	a	3	3	6	5	11	4	15	3
Germany[5]	6	19	1	6	0	3	3	3	6	4	10	6	16	3
Greece	4	15	4	4	0	4	4	2	6	6	12	3	15	3
Hungary	3	16	0	0	0	3	3	3	6	4	10	4	14	4
Iceland	6	16	a	6	1	3	3	3	6	7	13	3	16	4
Ireland	6	16	2.6	3	0	3	3	2	5	8	13	3	16	2
Israel	3	17	3	3	0	3	3	3	6	6	12	3	15	3
Italy	6	16	0.25	3	a	a	3	3	6	5	11	3	14	5
Japan	6	15	3	3	a	a	3	3	6	6	12	3	15	3
Korea	6	14	0	0	0	3	3	3	6	6	12	3	15	3
Latvia	5	16	1.5	1.5	1.5	1.5	3	4	7	6	13	3	16	3
Lithuania	6	16	2	0	0	3	3	4	7	4	11	6	17	2
Luxembourg	4	16	3	1	0	3	3	3	6	6	12	3	15	4
Mexico	3	17	0	0	0	3	3	3	6	6	12	3	15	3
Netherlands	5	17	4	4	0	4	3	3	6	6	12	3	15	3
New Zealand	6	16	0	3	0	3	3	2	5	6	11	4	15	3
Norway[6]	6	16	1.6	6	x(7)	x(8)	1[d]	5[d]	6	7	13	3	16	3
Poland	6	15	3	3	a	a	3	4	7	4	11	4	15	4
Portugal	6	18	3	0	0	3	3	3	6	6	12	3	15	3
Slovak Republic	5	16	4	5	a	a	3	3	6	4	10	5	15	4
Slovenia	6	15	0.92	1	0.92	2	3	3	6	6	12	3	15	4
Spain	6	16	3	3	0	3	3	3	6	6	12	3	15	3
Sweden	6	15	1	1	1	2	3	4	7	6	13	3	16	3
Switzerland	4	15	4	4	a	a	4	2	6	6	12	3	15	4
Türkiye	6	18	5	3	0	3	3	3	6	4	10	4	14	4
United Kingdom	5	18	3	3	0	3	3	2	5	6	11	3	14	4
United States	5	16	3-6	5	0	3	3	3	6	6	12	3	15	3
Partner and/or accession countries														
Argentina	4	17	m	m	0	3	3	3	6	6	12	3	15	3
Brazil	4	17	0	4	0	4	4	2	6	5	11	4	15	3
Bulgaria	4	16	3	3	a	a	3	4	7	4	11	3	14	5
China	6	14	m	m	m	m	3	3	6	6	12	3	15	3
Croatia	6	16	0.5	6	0	3	3	3	7	4	11	4	15	4
India	6	13	m	m	m	m	3	3	6	5	11	3	14	4
Indonesia	7	15	m	m	0	5	5	2	7	6	13	3	16	3
Peru	5	17	m	m	0	3	3	3	6	6	12	3	15	2
Romania	4	19	0.16	0	0	3	3	3	6	5	11	4	15	4
Saudi Arabia	6	14	m	m	2	1	3	3	6	6	12	3	15	3
South Africa	7	15	m	m	0	3	3	4	7	7	14	2	16	3

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Annex 2. Reference statistics

Annex 2 Tables

Table X2.1	Basic reference statistics in current prices (reference period: calendar year, 2015, 2020, 2021, 2022, 2023)
Table X2.2	Basic reference statistics (reference period: calendar year, 2015, 2020, 2021, 2022, 2023)
Table X2.3	Pre-primary and primary teachers' statutory salaries, in national currencies, based on the most prevalent qualifications at different points in teachers' careers (2024)
Table X2.4	Secondary teachers' statutory salaries, in national currencies, based on the most prevalent qualifications at different points in teachers' careers (2024)
Table X2.5	Trends in teachers' statutory starting salaries, in national currencies (2000 and 2005 to 2024)
Table X2.6	Trends in teachers' statutory salaries after 15 years of experience, in national currencies (2000 and 2005 to 2024)
Table X2.7	Trends in teachers' average actual salaries, in national currencies (2000, 2005 and 2010 to 2024)
Table X2.8	Reference statistics used in calculating salaries of teachers and school heads (2000 and 2005 to 2024)
Table X2.9	Distribution of teachers, by minimum or most prevalent qualifications and level of education (2024)
Table X2.10	Distribution of teachers aged 25-64, by educational attainment and level of education (2024)
Table X2.11	Distribution of school heads aged 25-64, by educational attainment and level of education (2024)

StatLink https://stat.link/c7vgxe

Data Download

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Data cut-off for the print publication 13 June 2025. Please note that the Data Explorer contains the most recent data..

Notes for Tables

Table X2.1. Basic reference statistics in current prices (reference period: calendar year, 2015, 2020, 2021, 2022, 2023)

Note: For countries where GDP is not reported for the same reference period as data on educational finance, GDP is estimated as: wt-1 (GDPt - 1) + wt (GDPt), where wt and wt-1 are the weights for the respective portions of the two reference periods for GDP which fall within the educational financial year. Adjustments were made in Part C for Australia, Canada, Japan, New Zealand, the United Kingdom and the United States.

1. The GDP mainland market value is used for Norway.

Source: OECD (2025), OECD Data Explorer, "Annual GDP and components - expenditure approach" and "Annual government non-financial accounts and key indicators (Expenditure)" (https://data-explorer.oecd.org).

Table X2.2. Basic reference statistics (reference period: calendar year, 2015, 2020, 2021, 2022, 2023)

1. GDP deflator mainland figures are used for Norway.

Source: OECD (2025), OECD Data Explorer, "Annual Purchasing Power Parities and exchange rates", "Annual population and employment, national concept", and "Annual GDP and components - expenditure approach" (https://data-explorer.oecd.org).

Table X2.3. Pre-primary and primary teachers' statutory salaries, in national currencies, based on the most prevalent qualifications at different points in teachers' careers (2024)

Note: The definition of teachers' most prevalent qualifications is based on a broad concept, including the typical ISCED level of attainment and other criteria. The most prevalent qualification is defined for each of the four career stages included in this table. In many cases, the minimum qualification is the same as the most prevalent qualification. The minimum and the most prevalent qualifications are described in Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

1. Year of reference: 2023 (calendar year for Sweden).
2. Data on teachers in pre-primary programmes include the data for teachers in early childhood education and care.
3. Data exclude the social security contributions and pension scheme contributions paid by the employees.
4. Actual salaries (including teachers of general subjects within vocational programmes in Sweden, and excluding bonuses and allowances in the United States).

Table X2.4. Secondary teachers' statutory salaries, in national currencies, based on the most prevalent qualifications at different points in teachers' careers (2024)

Note: The definition of teachers' most prevalent qualifications is based on a broad concept, including the typical ISCED level of attainment and other criteria. The most prevalent qualification is defined for each of the four career stages included in this table. In many cases, the minimum qualification is the same as the most prevalent qualification. The minimum and the most prevalent qualifications are described in Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

1. Year of reference: 2023 (calendar year for Sweden).
2. Data include the average of fixed bonuses for overtime hours.
3. Data exclude the social security contributions and pension scheme contributions paid by the employees.
4. Actual salaries (including teachers of general subjects within vocational programmes in Sweden, and excluding bonuses and allowances in the United States).

Table X2.5. Trends in teachers' statutory starting salaries, in national currencies (2000 and 2005 to 2024)

Note: Data on salaries for countries now in the euro area are shown in euros. Years 2006 to 2009, 2011 to 2014, 2016 to 2019 and 2021 to 2023 (i.e. Columns 3 to 6, 8 to 11, 13 to 16, 18 to 20, 24 to 27, 29 to 32, 34 to 37, 39 to 41, 45 to 48, 50 to 53, 55 to 58, 60 to 62, 66 to 69, 71 to 74, 76 to 79 and 81 to 83) are available for consultation on line (see StatLink). The definition of teachers' most prevalent qualifications is based on a broad concept, including the typical ISCED level of attainment and other criteria. The most prevalent qualification is defined for the career stage included in this table. In many cases, the minimum qualification is the same as the most prevalent qualification. The minimum and the most prevalent qualifications are described in Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

1. Actual salaries (including teachers of general subjects within vocational programmes in Sweden, and excluding bonuses and allowances in the United States).
2. The most prevalent qualification for pre-primary and primary teachers in 2000 was a bachelor's degree or equivalent (ISCED 6), and a master's degree or equivalent (ISCED 7) in subsequent years.

Table X2.6. Trends in teachers' statutory salaries after 15 years of experience, in national currencies (2000 and 2005 to 2024)

Note: Data on salaries for countries now in the euro area are shown in euros. Years 2006 to 2009, 2011 to 2014, 2016 to 2019 and 2021 to 2023 (i.e. Columns 3 to 6, 8 to 11, 13 to 16, 18 to 20, 24 to 27, 29 to 32, 34 to 37, 39 to 41, 45 to 48, 50 to 53, 55 to 58, 60 to 62, 66 to 69, 71 to 74, 76 to 79 and 81 to 83) are available for consultation on line (see StatLink). The definition of teachers' most prevalent qualifications is based on a broad concept, including the typical ISCED level of attainment and other criteria. The most prevalent qualification is defined for the career stage included in this table. In many cases, the minimum qualification is the same as the most prevalent qualification. The minimum and the most prevalent qualifications are described in Table D.D3.3 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

1. Figures for the pre-primary level refer to primary teachers (in primary schools only) teaching pre-primary classes.
2. Actual salaries (including teachers of general subjects within vocational programmes in Sweden, and excluding bonuses and allowances in the United States).
3. The most prevalent qualification for pre-primary and primary teachers in 2000 was a bachelor's degree or equivalent (ISCED 6), and a master's degree or equivalent (ISCED 7) in subsequent years.

Table X2.7. Trends in teachers' average actual salaries, in national currencies (2000, 2005 and 2010 to 2024)[1]

Note: Years 2011 to 2014, 2016 to 2019 and 2021 to 2023 (i.e. Columns 4 to 7, 9 to 12, 14 to 16, 21 to 24, 26 to 29, 31 to 33, 38 to 41, 43 to 46, 48 to 50, 55 to 58, 60 to 63 and 65 to 67) are available for consultation on line (see StatLink). See explanations on the break in the time series in Table D.D3.12 in *Education at a Glance 2025 Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en).

1. Data on salaries for countries now in the euro area are shown in euros.
2. Data on teachers in pre-primary education include the data for teachers in early childhood education and care.

Table X2.8. Reference statistics used in calculating salaries of teachers and school heads (2000 and 2005 to 2024)

Note: Values for PPPs and deflators were extracted from the OECD Data Explorer on national accounts on 02 April 2025. As 2024 PPPs were not available on this date, values for 2023 have been used for 2024. Deflators for the years 2006 to 2009, 2011 to 2014, 2016 to 2019 and 2021 (i.e. Columns 8 to 11, 13 to 16, 18 to 21 and 23) are available for consultation on line (see StatLink).

1. Data on PPPs for countries now in the euro area are shown in euros
2. Data on PPPs and deflators refer to the whole country: Belgium for the Flemish and the French Community of Belgium, and the United Kingdom for England and Scotland.

Table X2.9. Distribution of teachers, by minimum or most prevalent qualifications and level of education (2024)

Note: See *Definitions* and *Methodology* sections of Chapter D3 for more information.

1. Year of reference: 2023 (calendar year for Sweden).
2. Government-dependent private institutions included.

Table X2.10. Distribution of teachers aged 25-64, by educational attainment and level of education (2024)

1. Reference year differs from 2024: 2023 for Czechia, Slovenia and Sweden (calendar year); and 2022 for Chile and France (calendar year).

Table X2.11. Distribution of school heads aged 25-64, by educational attainment and level of education (2024)

1. Reference year differs from 2024: 2023 for Chile, Czechia, Poland, Slovenia and Sweden (calendar year); and 2022 for France (calendar year).

Control codes

a – category not applicable; **b** – break in series; **d** – contains data from another column; **m** – missing data; **x** – contained in another column (indicated in brackets). For further control codes, see the Reader’s Guide.

For further methodological information, see *Education at a Glance 2025: Sources, Methodologies and Technical Notes* (https://doi.org/10.1787/fcfaf2d1-en)].

Table X2.1. Basic reference statistics in current prices (reference period: calendar year, 2015, 2020, 2021, 2022, 2023)

	Gross domestic product (GDP) (in millions of local currency, current prices)					Total government expenditure (in millions of local currency, current prices)				
	2015	2020	2021	2022	2023	2015	2020	2021	2022	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Australia	1 641 040	2 033 743	2 208 076	2 448 921	2 620 086	620 240	918 324	921 501	956 184	1 030 499
Austria	342 084	380 318	406 232	448 007	473 227	175 201	217 971	227 597	237 490	249 349
Belgium	415 538	463 751	506 023	563 544	596 321	223 896	271 076	277 962	294 400	317 595
Canada	1 999 215	2 299 350	2 614 599	2 871 658	m	812 749	1 182 045	1 173 641	1 180 084	1 257 226
Chile	158 622 903	201 257 745	239 561 981	263 842 661	281 870 321	40 935 942	61 261 849	82 121 706	73 214 343	m
Colombia	804 692 000	998 471 000	1 192 634 000	1 469 791 000	1 572 458 300	363 651 000	515 231 000	576 600 000	675 934 000	m
Costa Rica	30 171 919	36 495 246	40 326 626	44 810 031	47 059 272	9 099 110	12 475 503	12 648 102	17 933 221	19 236 534
Czechia	4 651 813	5 828 318	6 307 755	7 049 872	7 618 528	1 939 667	2 695 753	2 840 033	3 030 666	3 344 331
Denmark	2 030 206	2 326 592	2 567 520	2 844 228	2 804 742	1 104 800	1 240 994	1 269 114	1 276 893	1 313 529
Estonia	21 011	27 859	31 456	36 443	38 188	8 248	12 464	13 241	14 565	16 520
Finland	210 192	236 387	248 764	266 135	272 782	117 168	133 447	137 103	140 085	152 633
France	2 201 402	2 318 276	2 508 102	2 655 435	2 822 455	1 268 008	1 430 357	1 491 424	1 550 743	1 609 883
Germany	3 085 650	3 449 620	3 676 460	3 953 850	4 185 550	1 373 293	1 763 784	1 864 302	1 937 465	2 024 970
Greece	175 363	167 540	184 575	207 854	225 197	96 036	99 338	104 688	109 858	111 577
Hungary	34 984 755	48 807 766	55 556 986	66 165 628	75 086 595	17 616 154	24 907 128	26 715 126	32 244 502	37 146 477
Iceland	2 310 848	2 929 165	3 279 524	3 892 031	4 321 079	1 004 612	1 496 813	1 618 761	1 812 194	1 966 222
Ireland	272 544	382 207	449 217	520 935	509 952	76 430	101 915	105 804	107 285	115 912
Israel	1 179 534	1 414 039	1 582 324	1 764 412	1 878 373	450 852	643 833	643 262	662 013	752 095
Italy	1 663 278	1 670 012	1 842 507	1 998 073	2 131 390	835 694	948 296	1 032 343	1 096 547	1 144 854
Japan	539 615 375	543 001 575	554 927 725	568 357 625	m	208 962 800	248 455 700	243 338 200	242 646 800	240 295 200
Korea	1 740 776 000	2 058 466 500	2 221 912 900	2 323 781 500	2 401 189 400	504 008 400	738 883 100	786 289 800	860 322 100	844 308 600
Latvia	23 744	29 224	32 284	36 100	39 372	9 494	12 934	15 022	15 965	17 187
Lithuania	37 441	50 265	56 680	67 455	73 793	13 179	21 246	21 143	24 451	27 583
Luxembourg	54 142	64 524	72 361	77 529	79 310	21 861	30 341	30 974	33 986	37 968
Mexico	19 228 615	24 086 758	26 690 033	29 516 052	31 855 566	5 297 291	10 869 283	7 122 898	7 834 616	12 700 444
Netherlands	699 175	816 463	891 550	993 820	1 067 599	316 389	390 377	409 171	429 746	461 217
New Zealand	252 406	327 207	351 431	384 911	410 057	99 595	152 260	161 082	168 259	165 049
Norway[1]	2 614 238	3 067 339	3 288 436	3 570 859	3 288 436	1 533 194	1 994 429	2 035 860	2 186 991	2 384 960
Poland	1 809 564	2 362 909	2 661 518	3 100 850	3 401 610	750 899	1 127 935	1 159 588	1 341 141	1 600 439
Portugal	179 393	201 033	216 494	243 957	267 923	86 677	98 754	102 495	107 034	113 362
Slovak Republic	80 376	94 321	101 960	110 089	122 919	35 467	41 972	45 767	47 333	59 572
Slovenia	38 494	46 739	52 023	56 909	63 951	19 052	24 209	25 956	27 120	29 723
Spain	1 087 112	1 129 214	1 235 474	1 373 629	1 498 324	474 893	580 164	611 124	637 117	680 952
Sweden	4 231 745	5 020 978	5 464 876	5 865 211	6 212 143	2 129 789	2 660 856	2 727 550	2 869 511	3 065 198
Switzerland	668 006	696 620	745 067	791 087	803 632	224 542	267 037	265 845	259 224	266 813
Türkiye	2 350 941	5 048 568	7 256 142	15 011 780	26 545 720	746 115	1 810 867	2 269 956	4 103 040	8 807 923
United Kingdom	1 935 250	2 148 965	2 345 657	2 574 151	m	813 093	1 102 353	1 102 577	1 176 256	1 277 831
United States	17 951 579	21 447 044	22 517 638	24 844 032	26 863 801	6 910 981	10 093 748	10 724 143	9 977 767	10 846 788
Partner and/or accession countries										
Argentina	5 954 511	27 195 699	46 282 066	82 650 240	m	2 463 163	11 558 522	17 509 344	31 172 287	72 417 362
Brazil	5 995 787	7 609 597	9 012 142	10 079 677	10 856 112	3 921 250	5 354 228	5 486 479	m	m
Bulgaria	89 571	121 088	139 602	168 360	185 233	36 173	50 018	57 882	69 401	71 857
China	70 251 150	103 486 760	117 382 300	123 402 940	129 427 170	21 837 060	36 310 049	37 434 933	40 260 431	41 728 905
Croatia	45 971	50 747	58 347	67 615	78 048	21 854	27 232	28 063	30 346	36 383
India	137 718 739	198 540 960	235 973 985	269 496 459	295 356 668	37 265 268	61 585 922	70 098 252	78 544 891	85 993 341
Indonesia	11 526 332 800	15 443 353 200	16 976 751 400	19 588 089 900	20 892 376 700	2 028 883 753	2 845 700 423	3 076 816 119	3 400 751 480	3 479 159 723
Peru	604 416	703 915	878 380	945 329	1 001 860	136 195	188 246	206 341	219 973	224 628
Romania	712 549	1 069 629	1 192 285	1 389 450	1 604 554	255 618	443 565	473 889	561 176	645 983
Saudi Arabia	2 510 566	2 753 517	3 278 085	4 157 143	4 003 436	1 001 292	1 075 734	1 038 933	1 174 310	1 293 235
South Africa	4 420 793	5 562 760	6 220 152	6 655 524	7 023 994	1 333 492	1 925 591	2 024 171	2 121 767	2 291 285

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.2. Basic reference statistics (reference period: calendar year, 2015, 2020, 2021, 2022, 2023)

	Purchasing power parity for GDP (PPP) (USD = 1)					Gross domestic product (GDP) per capita (local currency, current prices)					GDP deflator (2020 = 100)				
	2015	2020	2021	2022	2023	2015	2020	2021	2022	2023	2015	2020	2021	2022	2023
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Australia	1.474	1.431	1.396	1.360	1.366	68 905	79 291	85 966	94 137	98 319	87.2	100.0	107.2	114.2	117.2
Austria	0.799	0.729	0.720	0.700	0.735	39 641	42 652	45 381	49 488	51 828	91.8	100.0	101.9	106.8	113.9
Belgium	0.800	0.716	0.720	0.708	0.732	36 858	40 190	43 675	48 249	50 621	91.4	100.0	102.7	109.8	114.7
Canada	1.248	1.202	1.163	1.152	1.135	55 993	60 464	68 374	73 753	m	92.8	100.0	107.8	116.3	117.9
Chile	391.361	409.842	423.014	436.528	437.099	8 826 396	10 343 023	12 173 878	13 306 192	14 121 131	79.8	100.0	106.9	115.4	123.0
Colombia	1 289.324	1 270.744	1 340.326	1 373.871	1 445.980	17 744 641	20 269 008	23 880 681	29 107 551	30 815 672	81.9	100.0	107.8	123.8	131.7
Costa Rica	353.964	328.024	334.119	340.131	328.309	6 247 222	7 143 969	7 813 648	8 598 560	8 946 497	90.3	100.0	102.4	108.8	108.7
Czechia	12.935	12.150	12.562	12.775	13.177	442 711	554 964	600 690	655 221	700 358	86.8	100.0	104.0	113.1	122.2
Denmark	7.303	6.365	6.288	6.225	6.396	357 277	399 093	438 561	481 551	471 545	94.3	100.0	102.8	112.1	107.9
Estonia	0.537	0.515	0.534	0.565	0.596	15 999	20 964	23 650	27 364	27 958	85.8	100.0	105.4	122.0	131.8
Finland	0.908	0.802	0.791	0.781	0.793	38 353	42 741	44 891	47 893	48 908	94.2	100.0	102.5	108.8	112.6
France	0.808	0.693	0.704	0.694	0.709	33 197	34 280	36 954	39 006	41 332	93.9	100.0	101.2	104.5	110.0
Germany	0.778	0.707	0.707	0.698	0.726	37 774	41 481	44 190	47 183	49 525	92.0	100.0	102.8	109.1	115.8
Greece	0.609	0.530	0.521	0.511	0.526	16 206	15 660	17 347	19 647	21 349	100.6	100.0	101.4	108.0	114.3
Hungary	132.518	141.838	148.351	156.477	173.652	3 570 691	5 047 120	5 768 599	6 888 612	7 827 892	81.2	100.0	106.3	121.4	139.1
Iceland	141.937	143.253	142.588	138.402	143.869	7 121 257	8 223 372	9 069 479	10 516 160	11 386 243	86.9	100.0	106.4	115.8	122.4
Ireland	0.809	0.775	0.752	0.734	0.769	58 040	75 919	88 223	100 185	96 292	96.2	100.0	101.1	107.9	111.8
Israel	3.924	3.747	3.658	3.447	3.571	140 805	153 461	168 919	184 737	192 525	96.1	100.0	102.3	107.3	112.2
Italy	0.738	0.632	0.625	0.602	0.624	27 616	28 096	31 159	33 858	36 135	94.5	100.0	101.3	104.8	111.0
Japan	103.450	100.742	99.211	94.514	95.271	4 245 263	4 319 533	4 421 664	4 548 790	m	98.1	100.0	99.8	100.2	104.3
Korea	857.368	829.359	829.868	816.608	828.392	34 122 827	39 711 137	42 918 928	44 970 904	46 432 994	94.6	100.0	103.2	105.0	107.0
Latvia	0.497	0.470	0.464	0.481	0.502	12 008	15 374	17 129	19 139	20 926	87.3	100.0	103.3	113.5	120.3
Lithuania	0.446	0.433	0.440	0.472	0.505	12 861	17 885	20 182	23 822	25 698	87.9	100.0	106.0	123.0	134.1
Luxembourg	0.881	0.838	0.834	0.819	0.853	95 087	102 234	112 863	118 315	118 771	92.1	100.0	104.6	110.6	114.4
Mexico	8.326	9.815	10.061	9.816	9.879	161 516	190 585	209 145	229 550	246 336	77.0	100.0	104.5	111.4	116.4
Netherlands	0.810	0.748	0.742	0.728	0.763	41 274	46 810	50 850	56 145	59 719	90.7	100.0	102.7	109.1	117.1
New Zealand	1.475	1.423	1.464	1.434	1.471	54 419	64 196	68 725	74 847	78 061	89.8	100.0	104.5	110.2	114.9
Norway[1]	9.930	9.588	8.985	8.531	9.202	503 707	570 243	608 069	654 363	595 731	89.2	100.0	103.5	110.1	115.3
Poland	1.765	1.698	1.753	1.828	1.991	47 643	63 577	71 986	82 078	90 395	90.3	100.0	105.3	116.6	127.7
Portugal	0.585	0.543	0.540	0.525	0.534	17 279	19 358	20 801	23 303	25 328	91.3	100.0	102.0	107.5	115.0
Slovak Republic	0.491	0.489	0.488	0.493	0.519	14 823	17 273	18 740	20 173	22 523	92.7	100.0	102.2	109.9	121.0
Slovenia	0.595	0.532	0.537	0.528	0.559	18 656	22 227	24 682	26 979	30 158	92.5	100.0	102.7	109.4	120.4
Spain	0.665	0.606	0.588	0.570	0.582	23 437	23 851	26 094	28 748	30 968	94.8	100.0	102.6	107.4	114.1
Sweden	8.852	8.436	8.364	8.426	8.766	431 847	484 957	524 671	557 149	586 084	89.9	100.0	102.7	108.7	115.2
Switzerland	1.235	1.105	1.057	0.987	0.999	80 582	80 587	85 559	90 077	90 141	101.0	100.0	101.3	104.4	105.3
Türkiye	1.162	2.111	2.752	4.518	7.350	30 056	60 545	86 232	176 651	311 109	54.7	100.0	129.0	252.8	425.4
United Kingdom	0.692	0.653	0.669	0.638	0.683	29 733	32 197	35 018	38 077	m	88.1	100.0	100.1	105.5	113.1
United States	1.000	1.000	1.000	1.000	1.000	55 731	64 638	67 749	74 480	80 141	92.4	100.0	104.6	112.0	116.1
Partner and/or accession countries															
Argentina	6.883	26.887	38.783	61.499	139.722	138 053	599 330	1 010 331	1 787 619	m	18.9	100.0	154.2	261.6	m
Brazil	2.006	2.265	2.379	2.411	2.436	29 467	35 936	42 248	47 802	51 282	77.0	100.0	113.0	122.7	128.5
Bulgaria	0.679	0.675	0.693	0.727	0.766	12 825	18 485	21 453	26 041	28 733	80.7	100.0	107.0	124.0	133.9
China	3.782	4.015	3.987	3.790	3.637	50 787	73 285	83 097	87 411	91 814	89.7	100.0	104.6	106.5	105.8
Croatia	0.466	0.410	0.407	0.418	0.443	10 925	12 846	14 873	17 258	19 798	94.2	100.0	102.1	110.3	123.2
India	19.115	20.319	20.728	20.654	20.203	107 341	146 480	172 422	190 165	206 741	83.6	100.0	108.4	115.7	117.2
Indonesia	4 390.646	4 791.007	4 808.429	4 917.821	4 819.781	45 097 404	57 154 442	62 258 309	71 029 554	m	89.1	100.0	106.0	116.1	117.9
Peru	1.711	1.706	1.734	1.695	1.744	20 171	21 575	26 589	28 306	29 701	86.6	100.0	110.1	115.3	122.9
Romania	1.662	1.615	1.568	1.646	1.723	35 947	55 432	62 291	72 927	84 161	78.8	100.0	105.6	118.4	133.5
Saudi Arabia	1.617	1.921	1.909	2.103	1.970	80 587	78 416	106 487	129 204	121 985	92.4	100.0	114.1	133.2	m
South Africa	5.817	7.249	7.376	7.229	7.313	81 216	95 803	105 801	111 825	116 618	77.3	100.0	106.5	111.9	117.2

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.3. Pre-primary and primary teachers' statutory salaries, in national currencies, based on the most prevalent qualifications at different points in teachers' careers (2024)

Annual salaries of full-time teachers in public institutions, by level of education

	Pre-primary				Primary			
	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	86 009	123 737	123 737	135 778	83 453	119 005	119 005	134 909
Austria[1]	m	m	m	m	46 191	48 969	54 818	80 608
Canada	m	m	m	m	61 290	102 016	105 785	106 847
Chile	14 711 080	18 137 783	22 078 733	27 202 611	14 711 080	18 137 783	22 078 733	27 202 611
Colombia	50 662 601	92 393 869	92 393 869	92 393 869	50 662 601	92 393 869	92 393 869	92 393 869
Costa Rica	9 342 667	10 974 367	11 790 217	14 237 767	9 435 183	11 083 403	11 907 513	14 379 843
Czechia	369 600	381 600	391 200	434 400	392 400	416 400	435 600	513 600
Denmark	396 885	449 587	449 587	449 587	455 224	505 778	524 351	524 351
Estonia	m	a	a	a	21 556	a	a	a
Finland[2]	32 846	35 814	36 156	36 156	36 194	41 493	44 401	47 065
France	32 164	35 329	36 492	51 812	32 164	35 329	36 492	51 812
Germany	m	m	m	m	57 991	66 735	70 304	75 289
Greece	13 664	16 496	17 912	26 408	13 664	16 496	17 912	26 408
Hungary	5 870 400	6 080 000	6 680 000	7 832 846	5 870 400	6 080 000	6 680 000	7 832 846
Iceland	8 092 140	8 169 372	8 526 552	8 709 696	8 092 140	8 169 372	8 526 552	8 709 696
Ireland	a	a	a	a	39 838	55 068	66 692	76 923
Israel	149 700	176 433	191 948	302 104	129 879	150 725	170 288	264 546
Italy	25 195	27 614	30 271	36 733	25 195	27 614	30 271	36 733
Japan	m	m	m	m	3 655 000	4 946 000	5 679 000	6 975 000
Korea	35 245 680	52 487 260	61 365 120	97 775 440	35 245 680	52 487 260	61 365 120	97 775 440
Latvia	14 880	m	m	23 808	14 688	m	m	23 496
Lithuania	21 384	22 074	24 590	27 981	21 384	22 074	24 590	27 981
Luxembourg	79 230	102 471	115 676	139 974	79 230	102 471	115 676	139 974
Mexico	282 519	351 213	435 915	544 293	282 519	351 213	435 915	544 293
Netherlands	46 681	66 992	76 169	95 773	46 681	66 992	76 169	95 773
New Zealand	m	m	m	m	61 329	97 920	97 920	97 920
Norway	485 400	556 600	556 600	569 100	592 100	609 200	609 200	654 700
Poland	57 696	68 399	83 102	86 610	57 696	68 399	83 102	86 610
Portugal	24 249	29 231	30 950	51 270	24 249	29 231	30 950	51 270
Slovak Republic	11 256	12 840	13 152	14 706	13 938	15 672	16 050	17 952
Slovenia	22 313	26 386	33 126	38 183	22 313	27 330	34 340	41 072
Spain	33 905	36 895	39 342	48 603	33 905	36 895	39 342	48 603
Sweden[1, 3, 4]	427 200	447 000	455 400	489 000	432 000	476 880	496 800	572 400
Switzerland	76 300	95 800	m	116 600	82 100	102 600	m	124 500
Türkiye	436 443	470 588	489 933	565 187	436 443	470 588	489 933	565 187
United States[4]	50 417	55 930	75 635	84 504	49 386	67 017	72 721	85 827
Other economies								
Flemish Comm. (Belgium)	40 062	50 178	56 461	71 123	40 062	50 178	56 461	71 123
French Comm. (Belgium)	38 402	47 976	53 993	66 028	38 402	47 976	53 993	66 028
England (UK)	31 000	a	47 841	47 841	31 000	a	47 841	47 841
Scotland (UK)	38 339	48 120	48 120	48 120	38 339	48 120	48 120	48 120
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	61 074	m	m	m	61 074	m	m	m
Bulgaria	22 236	22 932	23 820	m	22 236	22 932	23 820	m
China	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	20 540	21 460	21 971	24 526
India	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m
Peru	38 206	m	m	79 133	38 206	m	m	79 133
Romania	77 352	96 864	100 536	110 170	77 352	96 864	100 536	110 170
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.4. Secondary teachers' statutory salaries, in national currencies, based on the most prevalent qualifications at different points in teachers' careers (2024)

Annual salaries of full-time teachers in public institutions, by level of education

	Lower secondary, general programmes				Upper secondary, general programmes			
	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale	Starting salary	Salary after 10 years of experience	Salary after 15 years of experience	Salary at top of scale
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Australia	83 361	118 697	118 697	134 820	83 361	118 697	118 697	134 820
Austria[1]	46 191	51 234	57 398	85 552	46 191	55 527	62 219	94 782
Canada	61 290	102 016	106 829	106 847	61 290	102 016	106 829	106 847
Chile	14 711 080	18 137 783	22 078 733	27 202 611	15 209 028	18 802 045	22 842 486	28 198 507
Colombia	50 662 601	92 393 869	92 393 869	92 393 869	50 662 601	92 393 869	92 393 869	92 393 869
Costa Rica	9 723 350	11 423 090	12 272 960	14 822 570	9 723 350	11 423 090	12 272 960	14 822 570
Czechia	392 400	417 600	435 600	517 200	392 400	417 600	435 600	516 000
Denmark	456 911	510 891	528 260	528 260	428 063	556 294	556 294	556 294
Estonia	21 556	a	a	a	21 556	a	a	a
Finland	38 880	44 571	47 696	50 557	40 823	49 019	51 465	54 553
France[2]	34 838	38 002	39 165	54 752	34 838	38 002	39 165	54 752
Germany	64 030	72 547	76 400	83 450	66 563	74 807	79 002	89 849
Greece	13 664	16 496	17 912	26 408	13 664	16 496	17 912	26 408
Hungary	5 955 008	6 168 800	6 780 800	8 156 496	5 955 008	6 168 800	6 780 800	8 156 496
Iceland	8 092 140	8 169 372	8 526 552	8 709 696	7 514 688	9 099 888	9 546 924	9 546 924
Ireland	41 191	56 434	67 345	77 576	41 191	56 434	67 345	77 576
Israel	130 527	160 155	174 887	264 546	120 852	154 701	172 287	245 641
Italy	27 079	29 895	32 892	40 309	27 187	30 603	33 806	42 116
Japan	3 655 000	4 946 000	5 679 000	6 975 000	3 655 000	4 946 000	5 679 000	7 158 000
Korea	35 245 680	52 487 260	61 365 120	97 775 440	35 245 680	52 487 260	61 365 120	97 775 440
Latvia	14 688	m	m	23 496	14 688	m	m	23 496
Lithuania	21 384	22 074	24 590	27 981	21 384	22 074	24 590	27 981
Luxembourg	89 794	112 243	123 864	156 084	89 794	112 243	123 864	156 084
Mexico	352 982	440 972	550 997	688 148	667 408	767 892	819 504	819 504
Netherlands	46 536	70 973	81 282	95 776	46 536	70 973	81 282	95 776
New Zealand	61 329	97 920	97 920	97 920	64 083	103 086	103 086	103 086
Norway	592 100	609 200	609 200	654 700	592 100	665 000	665 000	741 000
Poland	57 696	68 399	83 102	86 610	57 696	68 399	83 102	86 610
Portugal	24 249	29 231	30 950	51 270	24 249	29 231	30 950	51 270
Slovak Republic	13 938	15 672	16 050	17 952	13 938	15 672	16 050	17 952
Slovenia	22 313	27 330	34 340	41 072	22 313	27 330	34 340	41 072
Spain	38 004	41 384	44 091	54 326	38 004	41 384	44 091	54 326
Sweden[1, 3, 4]	444 360	489 000	505 200	585 600	450 000	497 400	513 600	591 600
Switzerland	90 400	116 000	m	137 700	102 600	131 500	m	155 800
Türkiye	436 443	470 588	489 933	565 187	436 443	470 588	489 933	565 187
United States[4]	50 512	70 466	76 221	86 750	52 893	69 182	76 442	83 410
Other economies								
Flemish Comm. (Belgium)	40 062	50 178	56 461	71 123	49 922	63 563	72 452	90 230
French Comm. (Belgium)	38 402	47 976	53 993	66 028	47 732	60 794	69 306	83 493
England (UK)	31 000	a	47 841	47 841	31 000	a	47 841	47 841
Scotland (UK)	38 339	48 120	48 120	48 120	38 339	48 120	48 120	48 120
Partner and/or accession countries								
Argentina	m	m	m	m	m	m	m	m
Brazil	61 074	m	m	m	61 074	m	m	m
Bulgaria	22 236	22 932	23 820	m	22 236	22 932	23 820	m
China	m	m	m	m	m	m	m	m
Croatia	20 540	21 460	21 971	24 526	20 540	21 460	21 971	24 526
India	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m
Peru	38 206	m	m	79 133	38 206	m	m	79 133
Romania	77 352	96 864	100 536	110 170	77 352	96 864	100 536	110 170
Saudi Arabia	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.5. Trends in teachers' statutory starting salaries, in national currencies (2000 and 2005 to 2024)

Annual statutory starting teachers' salaries in public institutions for teachers with the most prevalent qualifications, by level of education

	Pre-primary						Primary					
	2000	2005	2010	2015	2020	2024	2000	2005	2010	2015	2020	2024
OECD countries	(1)	(2)	(7)	(12)	(17)	(21)	(22)	(23)	(28)	(33)	(38)	(42)
Australia	m	m	m	63 821	70 819	86 009	m	m	m	63 257	71 233	83 453
Austria	m	m	m	m	m	m	m	m	m	29 022	38 414	46 191
Canada	m	m	m	m	m	m	m	m	m	52 064	52 665	57 479
Chile	m	m	m	7 569 485	11 654 016	14 711 080	m	m	m	7 569 485	11 654 016	14 711 080
Colombia	m	m	m	22 612 928	34 696 391	50 662 601	m	m	m	22 612 928	34 696 391	50 662 601
Costa Rica	m	m	m	9 122 311	9 342 667	9 342 667	m	m	m	9 122 311	9 435 183	9 435 183
Czechia	m	m	m	242 000	338 400	369 600	m	m	m	251 200	360 000	392 400
Denmark	m	m	m	m	350 646	396 885	m	m	m	m	404 229	455 224
Estonia	m	m	m	a	a	m	m	m	m	10 400	15 520	21 556
Finland	m	m	m	28 611	29 201	32 846	m	m	m	32 412	33 140	36 194
France	20 181	21 031	22 026	24 595	26 197	32 164	20 181	21 031	22 026	24 595	26 197	32 164
Germany	m	m	m	m	m	m	m	m	m	44 860	51 695	57 991
Greece	m	m	m	13 104	13 104	13 664	m	m	m	13 104	13 104	13 664
Hungary	m	m	m	1 922 004	2 527 200	5 870 400	m	m	m	1 922 004	2 527 200	5 870 400
Iceland	m	m	m	m	m	8 092 140	m	m	m	m	m	8 092 140
Ireland	m	m	m	m	a	a	m	m	m	30 702	36 953	39 838
Israel	m	m	m	98 968	108 318	149 700	m	m	m	85 936	95 287	129 879
Italy	m	m	m	23 051	24 297	25 195	m	m	m	23 051	24 297	25 195
Japan	m	m	m	m	m	m	m	m	m	3 171 000	3 394 000	3 655 000
Korea	m	m	m	28 824 720	32 614 440	35 245 680	m	m	m	28 824 720	32 614 440	35 245 680
Latvia	m	m	m	4 860	9 000	14 880	m	m	m	4 860	9 000	14 688
Lithuania	m	m	m	m	10 476	21 384	m	m	m	m	14 573	21 384
Luxembourg	m	m	m	67 129	67 391	79 230	m	m	m	67 129	67 391	79 230
Mexico	m	m	m	164 657	230 295	282 519	m	m	m	164 657	230 295	282 519
Netherlands	m	m	m	32 562	39 504	46 681	m	m	m	32 562	39 504	46 681
New Zealand	m	m	m	m	m	m	m	m	m	46 117	54 318	61 329
Norway	m	m	m	364 500	410 000	485 400	m	m	m	425 650	489 700	592 100
Poland	m	m	m	29 044	35 880	57 696	m	m	m	29 044	35 880	57 696
Portugal	m	m	m	21 960	22 351	24 249	m	m	m	21 960	22 351	24 249
Slovak Republic	m	m	m	6 222	8 592	11 256	m	m	m	6 960	10 646	13 938
Slovenia	m	m	m	16 864	19 529	22 313	m	m	m	16 864	19 529	22 313
Spain	m	m	m	28 129	30 550	33 905	m	m	m	28 129	30 550	33 905
Sweden[1]	m	m	m	330 000	397 200	m	m	m	m	330 000	402 000	
Switzerland	m	m	m	72 200	74 900	76 300	m	m	m	79 053	80 300	82 100
Türkiye	m	m	m	39 802	72 036	436 443	m	m	m	39 802	72 036	436 443
United States[1, 2]	m	m	m	43 570	41 427	50 417	m	m	m	42 563	49 494	57 489
Other economies												
Flemish Comm. (Belgium)	m	m	m	m	33 061	40 062	m	m	m	m	33 061	40 062
French Comm. (Belgium)	m	m	m	m	32 010	38 402	m	m	m	m	32 010	38 402
England (UK)	m	m	m	22 023	25 305	31 000	m	m	m	22 023	25 305	31 000
Scotland (UK)	m	m	m	21 867	32 034	38 339	m	m	m	21 867	32 034	38 339
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	61 074	m	m	m	m	m	61 074
Bulgaria	m	m	m	m	m	22 236	m	m	m	m	m	22 236
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	20 540
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	38 206	m	m	m	m	m	38 206
Romania	m	m	m	m	m	77 352	m	m	m	m	m	77 352
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

	Lower secondary, general programmes						Upper secondary, general programmes					
	2000	2005	2010	2015	2020	2024	2000	2005	2010	2015	2020	2024
OECD countries	(43)	(44)	(49)	(54)	(59)	(63)	(64)	(65)	(70)	(75)	(80)	(84)
Australia	m	m	m	63 213	71 230	83 361	m	m	m	63 213	71 230	83 361
Austria	m	m	m	30 340	38 224	46 191	m	m	m	31 775	38 325	46 191
Canada	m	m	m	52 064	52 665	57 479	m	m	m	52 064	52 665	57 479
Chile	m	m	m	7 569 485	11 654 016	14 711 080	m	m	m	7 756 420	12 051 072	15 209 028
Colombia	m	m	m	22 612 928	34 696 391	50 662 601	m	m	m	22 612 928	34 696 391	50 662 601
Costa Rica	m	m	m	12 657 737	9 723 350	9 723 350	m	m	m	12 657 737	9 723 350	9 723 350
Czechia	m	m	m	251 200	360 000	392 400	m	m	m	251 200	360 000	392 400
Denmark	m	m	m	m	406 280	456 911	m	m	m	m	382 229	428 063
Estonia	m	m	m	10 400	15 520	21 556	m	m	m	10 400	15 520	21 556
Finland	m	m	m	35 005	35 792	38 880	m	m	m	37 120	37 954	40 823
France	21 278	22 173	23 220	26 686	28 735	34 838	21 278	22 173	23 220	26 686	28 735	34 838
Germany	m	m	m	50 448	57 311	64 030	m	m	m	50 764	59 935	66 563
Greece	m	m	m	13 104	13 104	13 664	m	m	m	13 104	13 104	13 664
Hungary	m	m	m	1 922 004	2 527 200	5 955 008	m	m	m	2 105 922	2 527 200	5 955 008
Iceland	m	m	m	m	6 854 066	8 092 140	m	m	m	m	m	7 514 688
Ireland	m	m	m	30 702	36 953	41 191	m	m	m	30 702	36 953	41 191
Israel	m	m	m	86 414	95 764	130 527	m	m	m	89 187	115 820	120 852
Italy	m	m	m	24 849	26 114	27 079	m	m	m	24 849	26 114	27 187
Japan	m	m	m	3 171 000	3 394 000	3 655 000	m	m	m	3 171 000	3 394 000	3 655 000
Korea	m	m	m	28 884 720	32 674 440	35 245 680	m	m	m	28 164 720	31 954 440	35 245 680
Latvia	m	m	m	4 860	9 000	14 688	m	m	m	4 860	9 000	14 688
Lithuania	m	m	m	m	14 573	21 384	m	m	m	m	14 573	21 384
Luxembourg	m	m	m	77 897	76 376b	89 794	m	m	m	77 897	76 376	89 794
Mexico	m	m	m	211 345	292 733	352 982	m	m	m	409 330	563 277	667 408
Netherlands	m	m	m	34 840	39 806	46 536	m	m	m	34 840	39 806	46 536
New Zealand	m	m	m	47 700	54 318	61 329	m	m	m	49 282	54 318	64 083
Norway	m	m	m	425 650	489 700	m	m	m	m	477 700	531 700	611 600
Poland	m	m	m	29 044	35 880	57 696	m	m	m	29 044	35 880	57 696
Portugal	m	m	m	21 960	22 351	24 249	m	m	m	21 960	22 351	24 249
Slovak Republic	m	m	m	6 960	10 646	13 938	m	m	m	6 960	10 646	13 938
Slovenia	m	m	m	16 864	19 529	22 313	m	m	m	16 864	19 529	22 313
Spain	m	m	m	31 415	34 121	38 004	m	m	m	31 415	34 121	38 004
Sweden[1]	m	m	m	330 000	414 000	m	m	m	m	342 000	416 400	m
Switzerland	m	m	m	89 509	89 500	90 400	m	m	m	100 477	100 800	102 600
Türkiye	m	m	m	41 197	74 547	436 443	m	m	m	41 197	74 547	436 443
United States[1, 2]	m	m	m	44 322	49 211	59 273	m	m	m	43 678	49 710	56 537
Other economies												
Flemish Comm. (Belgium)	m	m	m	m	33 061	40 062	m	m	m	m	41 246	49 922
French Comm. (Belgium)	m	m	m	m	32 010	38 402	m	m	m	m	39 817	47 732
England (UK)	m	m	m	22 023	25 305	31 000	m	m	m	22 023	25 305	31 000
Scotland (UK)	m	m	m	21 867	32 034	38 339	m	m	m	21 867	32 034	38 339
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	61 074	m	m	m	m	32 738	61 074
Bulgaria	m	m	m	m	m	22 236	m	m	m	m	m	22 236
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	20 540	m	m	m	m	m	20 540
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	38 206	m	m	m	m	m	38 206
Romania	m	m	m	m	m	77 352	m	m	m	m	m	77 352
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.6. Trends in teachers' statutory salaries after 15 years of experience, in national currencies (2000 and 2005 to 2024)

Annual statutory teachers' salaries in public institutions for teachers with 15 years of experience and the most prevalent qualifications, by level of education

	Pre-primary						Primary					
	2000	2005	2010	2015	2020	2024	2000	2005	2010	2015	2020	2024
OECD countries	(1)	(2)	(7)	(12)	(17)	(21)	(22)	(23)	(28)	(33)	(38)	(42)
Australia	m	62 240	74 125	91 291	106 583	123 737	m	62 240	75 382	91 805	102 380	119 005
Austria[1]	m	31 050	35 526	m	m	m	25 826	31 050	35 526	38 225	46 156	54 818
Canada	m	m	m	m	m	m	m	m	m	87 202	93 640	105 785
Chile	m	m	9 154 829	11 449 961	17 528 510	22 078 733	m	m	9 154 829	11 449 961	17 528 510	22 078 733
Colombia	m	m	m	41 239 431	63 276 168	92 393 869	m	m	m	41 239 431	63 276 168	92 393 869
Costa Rica	m	m	m	m	11 790 217	11 790 217	m	m	m	m	11 907 513	11 907 513
Czechia	m	m	m	251 160	358 800	391 200	m	m	m	272 200	399 600	435 600
Denmark	m	m	m	m	397 756	449 587	m	m	m	m	465 241	524 351
Estonia	m	m	m	a	a	a	3 068	4 379	7 728	m	a	a
Finland	19 956	23 333	28 331	30 900	31 966	36 156	24 961	30 791	37 769	39 769	40 824	44 401
France	27 151	28 290	29 610	30 140	32 583	36 492	27 151	28 290	29 610	30 140	32 583	36 492
Germany	m	m	m	m	m	m	m	43 320	47 647	56 267	63 484	70 304
Greece	16 292	21 237	25 001	17 592	17 352	17 912	16 292	21 237	25 001	17 592	17 352	17 912
Hungary	751 668	1 739 076	1 780 884	2 884 041	3 178 980	6 680 000	897 168	1 944 576	1 916 568	2 884 041	3 178 980	6 680 000
Iceland	m	2 821 586	3 901 395	m	6 676 644	8 526 552	m	3 100 440	4 264 973	m	6 630 444	8 526 552
Ireland	m	m	m	m	a	a	33 370	48 206	57 390	57 390	62 072	66 692
Israel	72 174	82 076	99 707	145 012	158 912	191 948	75 912	82 179	115 299	130 922	138 394	170 288
Italy	m	25 234	27 645	27 845	29 162	30 271	20 849	25 234	27 645	27 845	29 162	30 271
Japan	m	m	m	m	m	m	6 645 000	6 236 000	5 555 000	5 535 000	5 619 000	5 679 000
Korea	m	38 608 000	42 003 257	50 422 920	57 579 740	61 365 120	m	39 712 000	42 003 257	50 422 920	57 579 740	61 365 120
Latvia	1 321	2 321	4 069	5 040	a	m	1 321	2 321	4 069	5 040	a	m
Lithuania	m	m	m	6 220	13 158	24 590	m	m	m	9 031	16 727	24 590
Luxembourg	m	62 139	93 182	106 536	98 391	115 676	m	62 139	93 182	106 536	98 391	115 676
Mexico	110 833	159 128	208 871	272 901	364 137	435 915	110 833	159 128	208 871	272 901	364 137	435 915
Netherlands	m	m	m	49 002	60 939	76 169	m	m	m	49 002	60 939	76 169
New Zealand	m	m	m	m	m	m	m	m	m	69 099	83 000	97 920
Norway	m	287 000	353 700	419 500	500 000	556 600	m	327 500	386 000	460 850	536 800	609 200
Poland	m	31 216	40 120	47 645	58 441	83 102	m	31 216	40 120	47 645	58 441	83 102
Portugal	m	24 759	27 038	26 321	28 857	30 950	m	24 759	27 038	26 321	28 857	30 950
Slovak Republic	m	m	6 136	7 160	10 036	13 152	m	m	7 492	9 794	12 258	16 050
Slovenia	m	m	26 635	24 607	28 275	33 126	14 123	21 465	27 164	25 550	29 333	34 340
Spain	m	28 122	33 889	32 389	35 339	39 342	m	28 122	33 889	32 389	35 339	39 342
Sweden[2]	m	261 000	m	354 600	420 144	m	m	283 200	m	379 200	463 200	m
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	4 560	16 464	27 701	42 367	77 517	489 933	4 560	16 464	27 701	42 367	77 517	489 933
United States[2, 3]	36 758	41 500	m	m	62 193	75 635	38 046	51 413	52 742	60 705	62 102	72 721
Other economies												
Flemish Comm. (Belgium)	29 586	35 417	40 042	43 842	46 673	56 461	29 586	35 417	40 042	43 842	46 673	56 461
French Comm. (Belgium)	28 485	33 428	38 610	42 425	45 056	53 993	28 485	33 428	38 610	42 425	45 056	53 993
England (UK)	30 018	33 978	35 929	38 584	41 687	47 841	30 018	33 978	35 929	38 584	41 687	47 841
Scotland (UK)	14 022	29 827	33 666	34 887	40 206	48 120	22 743	29 827	33 666	34 887	40 206	48 120
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	23 820	m	m	m	m	m	23 820
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	21 971
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	100 536	m	m	m	m	m	100 536
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

	Lower secondary, general programmes						Upper secondary, general programmes					
	2000	2005	2010	2015	2020	2024	2000	2005	2010	2015	2020	2024
OECD countries	(43)	(44)	(49)	(54)	(59)	(63)	(64)	(65)	(70)	(75)	(80)	(84)
Australia	m	62 384	75 382	91 903	96 709	118 697	m	62 384	75 382	91 903	102 467	118 697
Austria[1]	26 916	33 635	38 451	41 334	48 325	57 398	29 728	34 265	41 382	44 500	52 635	62 219
Canada	m	m	m	87 202	93 640	106 829	m	m	m	87 202	93 640	106 829
Chile	m	m	9 154 829	11 449 961	17 528 510	22 078 733	m	m	9 700 782	11 694 832	18 137 514	22 842 486
Colombia	m	m	m	41 239 431	63 276 168	92 393 869	m	m	m	41 239 431	63 276 168	92 393 869
Costa Rica	m	m	m	m	12 272 960	12 272 960	m	m	m	m	12 272 960	12 272 960
Czechia	m	m	m	272 200	400 800	435 600	m	m	m	272 200	400 800	435 600
Denmark	m	m	m	m	469 723	528 260	m	m	m	m	496 731	556 294
Estonia	3 068	4 379	7 728	m	a	a	3 068	4 379	7 728	m	a	a
Finland	28 293	34 677	40 791	42 951	44 090	47 696	31 115	36 550	43 168	46 363	47 584	51 465
France	28 249	29 433	30 803	32 231	35 121	39 165	28 249	29 433	30 803	32 231	35 121	39 165
Germany	m	46 842	52 784	61 058	69 508	76 400	m	53 096	57 150	64 767	71 880	79 002
Greece	16 292	21 237	25 001	17 592	17 352	17 912	16 292	21 237	25 001	17 592	17 352	17 912
Hungary	897 168	1 944 576	1 916 568	2 884 041	3 178 980	6 780 800	1 128 996	2 432 388	2 262 636	3 171 916	3 532 200	6 780 800
Iceland	m	3 100 440	4 264 973	m	6 630 444	8 526 552	m	3 198 000	4 104 000	m	7 187 328	9 546 924
Ireland	33 729	48 725	57 981	57 981	62 663	67 345	33 729	48 725	57 981	57 981	62 663	67 345
Israel	76 995	83 744	104 947	143 219	153 229	174 887	75 873	81 353	95 187	119 107	149 269	172 287
Italy	22 836	27 487	30 121	30 340	31 707	32 892	23 518	28 259	30 966	31 189	32 588	33 806
Japan	6 645 000	6 236 000	5 555 000	5 535 000	5 619 000	5 679 000	6 649 000	6 237 000	5 555 000	5 535 000	5 619 000	5 679 000
Korea	m	39 616 000	41 907 257	50 482 920	57 639 740	61 365 120	m	39 616 000	41 907 257	49 762 920	56 919 740	61 365 120
Latvia	1 321	2 321	4 069	5 040	a	m	1 321	2 321	4 069	5 040	a	m
Lithuania	m	m	m	9 031	16 727	24 590	m	m	m	9 031	16 727	24 590
Luxembourg	m	81 258	99 782	111 118	106 005	123 864	m	81 258	99 782	111 118	106 005	123 864
Mexico	141 093	203 399	268 456	350 283	465 340	550 997	m	m	m	514 509	692 596	819 504
Netherlands	m	m	m	61 556	69 554	81 282	m	m	m	61 556	69 554	81 282
New Zealand	m	m	m	71 780	83 000	97 920	m	m	m	74 460	83 000	103 086
Norway	m	327 500	386 000	460 850	536 800	609 200	m	364 000	434 700	524 400	588 100	665 000
Poland	m	31 216	40 120	47 645	58 441	83 102	m	31 216	40 120	47 645	58 441	83 102
Portugal	m	24 759	27 038	26 321	28 857	30 950	m	24 759	27 038	26 321	28 857	30 950
Slovak Republic	m	m	7 492	9 794	12 258	16 050	m	m	7 492	9 794	12 258	16 050
Slovenia	14 123	21 465	27 164	25 550	29 333	34 340	14 123	21 465	27 164	25 550	29 333	34 340
Spain	m	32 293	38 613	36 153	39 440	44 091	m	32 293	38 613	36 153	39 440	44 091
Sweden[2]	m	290 400	m	387 018	476 886	m	m	313 600	m	401 400	478 800	m
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	4 813	17 402	28 883	43 762	80 027	489 933	4 813	17 402	28 883	43 762	80 027	489 933
United States[2, 3]	43 834	47 215	55 919	62 369	66 105	76 221	43 918	49 467	55 724	61 327	65 248	76 442
Other economies												
Flemish Comm. (Belgium)	31 191	35 417	40 042	43 842	46 673	56 461	39 886	45 301	51 454	56 311	59 946	72 452
French Comm. (Belgium)	30 327	33 802	38 610	42 425	45 056	53 993	39 040	43 519	49 764	54 499	57 869	69 306
England (UK)	30 018	33 978	35 929	38 584	41 687	47 841	30 018	33 978	35 929	38 584	41 687	47 841
Scotland (UK)	22 743	29 827	33 666	34 887	40 206	48 120	22 743	29 827	33 666	34 887	40 206	48 120
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	23 820	m	m	m	m	m	23 820
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	21 971	m	m	m	m	m	21 971
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	100 536	m	m	m	m	m	100 536
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.7. Trends in teachers' average actual salaries, in national currencies (2000, 2005 and 2010 to 2024)[1]

Annual average salaries (including bonuses and allowances) of teachers aged 25-64, by level of education

	Pre-primary						Primary					
	2000	2005	2010	2015	2020	2024	2000	2005	2010	2015	2020	2024
OECD countries	(1)	(2)	(3)	(8)	(13)	(17)	(18)	(19)	(20)	(25)	(30)	(34)
Australia	m	m	77 641	m	101 104	113 890	m	m	78 352	81 730	93 686	107 072
Austria	m	m	m	m	m	m	m	m	m	47 416[b]	51 860	62 243
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	m	m	m	11 494 412	m	m	m	m	m	11 258 028	m	m
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	14 012 470	14681 286	m	m	m	m	14 691 156	15 117 447
Czechia	m	m	228 603	277 809	415 700	m	m	m	290 682	325 614	515 600	m
Denmark	m	m	m	m	393 200	442 181	m	m	m	m	477 308	536 402
Estonia	m	m	m	8 807	14 814	21 140	m	m	m	13 254	19 387	27 584
Finland[2]	m	m	29 759	32 637	34 406	39 313	28 723	35 654	40 458	44 085	45 301	49 722
France	m	m	31 467	33 835	38 202	m	m	m	30 881	32 978	37 111	m
Germany	m	m	m	m	m	m	m	m	m	53 610	60 792	67 580
Greece	m	m	m	16 085	17 328	18 127	m	m	m	16 085	17 328	18 127
Hungary	m	m	2 217 300	3 238 584	3 939 026	7142 672	m	m	2 473 800	3 373 500	4 111 792	7 566 381
Iceland[2]	m	m	m	5 261 000	6 772 000	9370 000	m	m	m	5 966 000	7 450 000	9 704 000
Ireland	m	m	m	m	m	a	m	m	m	m	58 975	64 892
Israel	m	m	110 959	161 247	169 452	207 592	m	m	123 151	162 049	175 071	206 679
Italy	m	m	25 774	28 672	29 157	32 870	m	m	25 774	28 672	29 157	32 870
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	7 435	11 913	15 660	m	m	m	9 981	15 278	18 876
Lithuania	m	m	m	9 732	18 576	29 592	m	m	m	9 732	18 576	29 592
Luxembourg	m	m	88 315	93 705	m	m	m	m	88 315	93 705	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	m	m	43 374	45 126	56 127	70 008	m	m	43 374	45 126	56 127	70 008
New Zealand	m	m	m	m	m	m	m	m	m	68 833	79 291	97 045
Norway	m	289 548	368 580	448 797	518 890	591 257	m	348 877	422 930	505 878	572 804	657 148
Poland	m	m	40 626	49 856	m	95 038	m	m	46 862	57 738	m	111 338
Portugal	m	m	m	31 234	33 805	36 749	m	m	m	28 561	30 502	34 523
Slovak Republic	m	m	m	8 986	13 144	17 170	m	m	m	12 185	17 089	22 061
Slovenia[2]	m	m	m	17 349	22 298	m	m	m	m	24 069	27 426	m
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden	204 516	252 268	296 997	343 285	403 158	m	239 887	288 154	323 621	378 684	457 892	m
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m
United States	38 028	40 268	48 103	50 946	54 934	66 325	38 746	41 059	49 133	52 516	55 980	68 153
Other economies												
Flemish Comm. (Belgium)	m	m	41 046	44 357	47 024	58 393	m	m	41 543	44 848	46 582	57 311
French Comm. (Belgium)	m	m	m	42 741	45 634	55 862	m	m	m	42 468	44 623	54 247
England (UK)	22 968	29 418	33 680	33 011	35 748	40 780	22 968	29 418	33 680	33 011	35 748	40 780
Scotland (UK)	m	m	31 884	33 166	37 492	46 786	m	m	31 884	33 166	37 492	46 786
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	49 540	m	m	m	m	m	50 944
Romania	m	m	m	m	m	101 352	m	m	m	m	m	104 909
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

	Lower secondary, general programmes						Upper secondary, general programmes					
	2000	2005	2010	2015	2020	2024	2000	2005	2010	2015	2020	2024
OECD countries	(35)	(36)	(37)	(42)	(47)	(51)	(52)	(53)	(54)	(59)	(64)	(68)
Australia	m	m	78 221	82 516	95 270	107 225	m	m	78 225	82 542	93 298	107 295
Austria	m	m	m	55 799[b]	58 483	68 215	m	m	m	60 152[b]	66 081	73 487
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	m	m	m	11 325 494	m	m	m	m	m	12 365 587	m	m
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	17 669 394	20 020 925	m	m	m	m	17 669 394	20 020 925
Czechia	m	m	289 771	325 034	512 000	m	m	m	313 534	338 662	537 100	m
Denmark	m	m	m	m	480 476	539 628	m	m	m	m	566 438	633 059
Estonia	m	m	m	13 254	19 387	27 584	m	m	m	13 254	19 387	27 584
Finland[2]	32 919	39 519	44 421	48 497	50 398	54 619	37 728	44 051	49 808	54 378	56 929	61 385
France	m	m	37 232	38 508	41 442	m	m	m	41 794	43 338	45 887	m
Germany	m	m	m	59 153	67 007	74 107	m	m	m	62 760	70 913	77 555
Greece	m	m	m	17 103	18 522	18 889	m	m	m	17 103	18 522	18 889
Hungary	m	m	2 473 800	3 373 500	4 111 792	7 566 381	m	m	2 814 100	3 588 180	4 471 546	7 802 739
Iceland[2]	m	m	m	5 966 000	7 450 000	9 704 000	m	m	5 172 300	7 931 000	9 988 000	12 519 000
Ireland	m	m	m	m	61 414	68 231	m	m	m	m	61 414	68 231
Israel	m	m	126 309	176 907	186 766	216 583	m	m	133 790	160 763	199 084	210 631
Italy	m	m	27 170	28 581	31 269	34 952	m	m	28 986	30 991	33 261	37 196
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	m	m	m	m	m	m	m	m	m	m	m	m
Latvia	m	m	m	9 320	15 069	18 876	m	m	m	10 430	16 499	19 116
Lithuania	m	m	m	9 732	18 576	29 592	m	m	m	9 732	18 576	29 592
Luxembourg	m	m	101 471	106 650	m	m	m	m	101 471	106 650	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	m	m	52 831	56 796	65 212	76 055	m	m	52 831	56 796	65 212	76 055
New Zealand	m	m	m	70 223	79 885	96 997	m	m	m	74 624	86 522	102 582
Norway	m	348 877	422 930	505 878	572 804	657 148	m	372 694	449 704	555 315	621 412	714 983
Poland	m	m	47 410	58 907	m	114 721	m	m	46 147	57 837	m	121 315
Portugal	m	m	m	27 903	29 686	34 182	m	m	m	30 431	32 093	36 650
Slovak Republic	m	m	m	12 185	17 089	22 061	m	m	m	12 176	17 737	23 391
Slovenia[2]	m	m	m	24 504	27 918	m	m	m	m	25 989	29 409	m
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden	247 793	290 058	324 639	389 624	476 260	m	265 488	315 592	347 967	405 662	484 829	m
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m
United States	39 500	41 873	50 158	53 548	58 625	70 578	41 124	43 588	52 188	55 328	61 162	72 927
Other economies												
Flemish Comm. (Belgium)	m	m	41 277	43 718	46 590	57 589	m	m	54 381	56 594	55 965	69 341
French Comm. (Belgium)	m	m	m	41 586	43 463	53 240	m	m	m	53 006	55 100	66 718
England (UK)	25 347	32 355	36 173	36 650	39 860	48 548	25 347	32 355	36 173	36 650	39 860	48 548
Scotland (UK)	m	m	31 884	33 166	37 492	46 786	m	m	31 884	33 166	37 492	46 786
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	m	m	m	m	m	m	m	m	m	m	m	m
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	49 924	m	m	m	m	m	49 924
Romania	m	m	m	m	m	105 831	m	m	m	m	m	107 757
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.8. Reference statistics used in calculating salaries of teachers and school heads (2000 and 2005 to 2024)

	Purchasing power parity (PPP) for private consumption[1]					Deflators for private consumption (2015 = 100)								Reference year for statutory salary data	Reference year for actual salary data
	2022	2023	2024	Jan 2023	Jan 2024	Jan 2000	Jan 2005	Jan 2010	Jan 2015	Jan 2020	Jan 2022	Jan 2023	Jan 2024		
OECD countries	(1)	(2)	(3)	(4)= [(1)+(2)] / 2	(5)= [(2)+(3)] / 2	(6)	(7)	(12)	(17)	(22)	(24)	(25)	(26)	(27)	(28)
Australia	1.44	1.45	1.45	1.45	1.45	69	78	91	100	107	113	119	124	2024	2024
Austria	0.73	0.75	0.75	0.74	0.75	76	82	90	100	108	115	125	132	2023/24	2023/24
Canada	1.23	1.22	1.22	1.23	1.22	80	87	93	100	106	113	118	121	2023/24	m
Chile	482.88	490.98	490.98	486.93	490.98	58	68	83	100	116	131	143	151	2024	2024
Colombia	1 546.10	1 597.05	1 597.05	1 571.58	1 597.05	48	66	83	100	123	142	158	170	2024	m
Costa Rica	364.00	364.48	364.48	364.24	364.48	30	52	83	100	110	120	126	126	2024	2024
Czechia	13.79	14.35	14.35	14.07	14.35	75	84	94	100	112	127	141	149	2023/24	2022/23
Denmark	7.37	7.16	7.16	7.26	7.16	77	84	93	100	103	108	114	116	2023/24	2023/24
Estonia	0.65	0.66	0.66	0.65	0.66	57	68	86	100	113	126	143	151	2023/24	2023/24
Finland	0.84	0.83	0.83	0.84	0.83	76	82	90	100	104	110	116	119	2023/24	2023/24
France	0.74	0.74	0.74	0.74	0.74	82	89	96	100	104	109	115	121	2023/24	2022
Germany	0.73	0.73	0.73	0.73	0.73	81	87	93	100	106	113	121	127	2023/24	2023/24
Greece	0.59	0.58	0.58	0.59	0.58	75	86	99	100	98	102	107	111	2023/24	2023/24
Hungary	176.60	194.02	194.02	185.31	194.02	51	70	88	100	115	133	153	167	2023/24	2023/24
Iceland	153.59	155.98	155.98	154.79	155.98	45	55	84	100	110	120	129	138	2023/24	2023/24
Ireland	0.95	0.95	0.95	0.95	0.95	82	96	95	100	106	113	122	129	2023/24	2023/24
Israel	3.84	3.88	3.88	3.86	3.88	75	81	92	100	100	104	108	112	2023/24	2023/24
Italy	0.67	0.66	0.66	0.67	0.66	74	84	93	100	104	110	116	120	2023/24	2023/24
Japan	104.97	104.84	104.84	104.90	104.84	108	103	100	100	102	104	107	110	2023/24	m
Korea	927.74	933.10	933.10	930.42	933.10	67	79	90	100	107	112	116	120	2024	m
Latvia	0.57	0.58	0.58	0.58	0.58	53	66	94	100	110	121	134	142	2023/24	2023/24
Lithuania	0.53	0.55	0.55	0.54	0.55	70	70	92	100	110	127	144	151	2023/24	2023/24
Luxembourg	0.91	0.90	0.90	0.91	0.90	74	84	92	100	108	113	118	121	2023/24	m
Mexico	10.67	10.79	10.79	10.73	10.79	47	62	83	100	123	139	146	150	2023/24	m
Netherlands	0.78	0.79	0.79	0.78	0.79	75	86	93	100	108	119	127	133	2023/24	2023/24
New Zealand	1.51	1.54	1.54	1.52	1.54	77	83	94	100	106	114	121	126	2024	2024
Norway	9.61	9.58	9.58	9.59	9.58	75	83	92	100	112	120	127	134	2023/24	2023/24
Poland	1.90	2.01	2.01	1.95	2.01	67	81	92	100	107	122	136	145	2023/24	2023/24
Portugal	0.59	0.59	0.59	0.59	0.59	72	85	94	100	106	112	119	123	2023/24	2023/24
Slovak Republic	0.58	0.60	0.60	0.59	0.60	61	80	92	100	106	117	130	139	2023/24	2023/24
Slovenia	0.59	0.61	0.61	0.60	0.61	63	82	94	100	104	113	122	127	2023/24	2022/23
Spain	0.64	0.62	0.62	0.63	0.62	71	83	94	100	104	110	117	122	2023/24	m
Sweden	8.66	8.74	8.74	8.70	8.74	82	88	96	100	108	115	123	128	2023/24	2023/24
Switzerland	1.17	1.13	1.13	1.15	1.13	95	98	103	100	101	102	104	106	2023/24	m
Türkiye	4.83	7.30	7.30	6.07	7.30	13	48	70	100	172	309	521	841	2023/24	m
United States	1.00	1.00	1.00	1.00	1.00	75	83	92	100	107	116	122	125	2023/24	2023/24
Other economies															
Flemish Comm. (Belgium)[2]	0.77	0.77	0.77	0.77	0.77	75	83	92	100	108	117	127	131	2023/24	2023/24
French Comm. (Belgium)[2]	0.77	0.77	0.77	0.77	0.77	75	83	92	100	108	117	127	131	2023/24	2023/24
England (UK)[2]	0.73	0.75	0.75	0.74	0.75	77	82	91	100	107	114	123	128	2023/24	2023/24
Scotland (UK)[2]	0.73	0.75	0.75	0.74	0.75	77	82	91	100	107	114	123	128	2023/24	2023/24
Partner and/or accession countries															
Argentina	m	m	m	m	m	10	16	31	100	519	1 226	2 554	7 459	m	m
Brazil	2.48	2.49	2.49	2.48	2.49	33	51	68	100	130	156	168	175	2024	m
Bulgaria	0.76	0.78	0.78	0.77	0.78	62	74	92	100	112	128	143	153	2023/24	m
China	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	0.49	0.51	0.51	0.50	0.51	67	78	93	100	102	111	122	128	2023/24	m
India	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	87	100	112	124	133	138	m	m
Romania	1.95	2.00	2.00	1.97	2.00	24	61	86	100	115	130	145	156	2023/24	2023/24
Saudi Arabia	1.94	1.91	1.91	1.92	1.91	m	m	m	m	m	m	m	m	m	m
South Africa	7.46	7.60	7.60	7.53	7.60	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.9. Distribution of teachers, by minimum or most prevalent qualifications and level of education (2024)

Teachers who have either the minimum or a higher than minimum (and most prevalent) qualification, in public institutions

	Pre-primary			Primary			Lower secondary, general programmes			Upper secondary, general programmes		
	Is there a difference between "minimum" and "most prevalent" qualifications?	Percentage of teachers in a salary range based on the minimum qualification for teachers to enter the teaching profession in 2024	Percentage of teachers in a salary range based on a higher than minimum (and most prevalent) qualification to enter the teaching profession in 2024	Is there a difference between "minimum" and "most prevalent" qualifications?	Percentage of teachers in a salary range based on the minimum qualification for teachers to enter the teaching profession in 2024	Percentage of teachers in a salary range based on a higher than minimum (and most prevalent) qualification to enter the teaching profession in 2024	Is there a difference between "minimum" and "most prevalent" qualifications?	Percentage of teachers in a salary range based on the minimum qualification for teachers to enter the teaching profession in 2024	Percentage of teachers in a salary range based on a higher than minimum (and most prevalent) qualification to enter the teaching profession in 2024	Is there a difference between "minimum" and "most prevalent" qualifications?	Percentage of teachers in a salary range based on the minimum qualification for teachers to enter the teaching profession in 2024	Percentage of teachers in a salary range based on a higher than minimum (and most prevalent) qualification to enter the teaching profession in 2024
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	No	100	a	No	100	a	No	100	a	No	100	a
Austria[1]	m	m	m	Yes	36	m	Yes	34	m	Yes	20	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile	No	m	a	No	m	a	No	m	a	No	m	a
Colombia	Yes	8	40	Yes	16	35	No	42[d]	a	No	x(8)	a
Costa Rica	Yes	6	94	Yes	13	77	Yes	9	66	Yes	9	66
Czechia	No	100	a	No	100	a	No	100	a	No	100	a
Denmark	No	100	a	No	100	a	No	100	a	No	100	a
Estonia	m	a	a	No	m	a	No	m	a	No	m	a
Finland	No	100	a	No	57	a	No	90	a	No	97	a
France	No	98	a	No	98	a	No	82	a	No	64	a
Germany	m	a	a	No	100	a	No	100	a	No	100	a
Greece	No	100	a	No	100	a	No	100	a	No	100	a
Hungary	No	100	a	No	100	a	Yes	42	58	No	100	a
Iceland	No	m	a	No	m	a	No	m	a	No	m	a
Ireland	m	a	a	No	34	a	No	33	a	No	33	a
Israel	No	60	a	No	49	a	Yes	37	m	Yes	41	m
Italy	No	100	a	No	100	a	No	100	a	No	100	a
Japan	m	a	a	No	m	a	No	m	a	No	m	a
Korea	Yes	m	m	No	m	a	Yes	m	m	Yes	m	m
Latvia	No	100	a	No	100	a	No	100	a	No	100	a
Lithuania	No	m	a	No	m	a	No	m	a	No	m	a
Luxembourg	No	71	a	No	85	a	No	64	a	No	77	a
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	No	100	a	No	100	a	No	100	a	No	100	a
New Zealand	a	a	a	No	53	a	No	46	a	Yes	16	69
Norway	No	100	a	No	10[d]	a	Yes	x(5)	x(6)	Yes	6	54
Poland	Yes	7	93	Yes	2	98	Yes	3	97	No	99	a
Portugal	No	100	a	No	100	a	No	100	a	No	100	a
Slovak Republic	No	m	a	No	m	a	No	m	a	No	m	a
Slovenia	No	100	a	No	100	a	No	100	a	No	100	a
Spain	No	100	a	No	100	a	No	100	a	No	100	a
Sweden[1]	No	100	a	No	100	a	No	100	a	No	100	a
Switzerland	No	100	a	No	100	a	No	100	a	No	100	a
Türkiye	No	m	a	No	m	a	No	m	a	No	m	a
United States	No	46	a	Yes	41	50	Yes	38	51	Yes	32	55
Other economies												
Flemish Comm. (Belgium)[2]	No	100	a	No	100	a	No	94	a	Yes	23	77
French Comm. (Belgium)	No	98	a	No	90	a	No	79	a	Yes	5	79
England (UK)	No	100	a	No	100	a	No	98	a	No	98	a
Scotland (UK)	No	100	a	No	100	a	No	100	a	No	100	a
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	No	m	a	No	m	a	No	m	a	No	m	a
Bulgaria	No	m	a	No	m	a	No	m	a	No	m	a
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	a	a	Yes	12[d]	88[d]	Yes	x(5)	x(6)	No	100	a
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	No	m	a	No	m	a	No	m	a	No	m	a
Romania	Yes	2	98	Yes	2	98	No	100	a	No	100	a
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.10. Distribution of teachers aged 25-64, by educational attainment and level of education (2024)

Percentage of teachers

	Pre-primary			Primary			Lower secondary, general programmes			Upper secondary, general programmes		
	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	m	m	m	m	m	m	m	m	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile[1]	1	99[d]	x(2)	1	99[d]	x(5)	1	99[d]	x(8)	3	97[d]	x(11)
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m
Czechia[1]	66	23	11	8	5	87	6	7	87	2	4	94
Denmark	m	m	m	m	m	m	m	m	m	0	0	100
Estonia	23	52	25	10	27	62	8	21	71	4	16	80
Finland	14	79	7	3	1	96	3	2	95	0	1	99
France[1]	x(4)	x(5)	x(6)	9[d]	58[d]	33[d]	x(10)	x(11)	x(12)	6[d]	54[d]	41[d]
Germany	m	m	m	m	m	100	m	m	100	m	m	100
Greece	x(4)	x(5)	x(6)	1[d]	79[d]	21[d]	x(10)	x(11)	x(12)	0[d]	69[d]	31[d]
Hungary	5	92	3	1[d]	72[d]	27[d]	x(4)	x(5)	x(6)	0	8	92
Iceland	21	53	26	10[d]	56[d]	34[d]	x(4)	x(5)	x(6)	15	32	53
Ireland	m	m	m	m	m	m	m	m	m	m	m	m
Israel	1	60	39	2	49	49	1	37	62	5	41	55
Italy	m	m	m	m	m	m	m	m	m	m	m	m
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	16	62	22	0	72	28	0	68	32	0	65	35
Latvia	27	47	25	x(7)	x(8)	x(9)	4[d]	36[d]	61[d]	4	25	71
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	18	70	12	8	78	14	14	70	17	m	m	m
Netherlands	x(4)	x(5)	x(6)	0[d]	81[d]	19[d]	x(10)	x(11)	x(12)	0[d]	64[d]	36[d]
New Zealand	m	m	m	6	89	6	5	87	8	1	82	16
Norway	5	94	1	5[d]	78[d]	18[d]	x(4)	x(5)	x(6)	2	46	51
Poland	0	7	93	0	2	98	0	3	97	0	1	99
Portugal	0	11	89	0	5	95	0	2	98	0	2	98
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia[1]	9	70	21	12	8	80	15	4	81	1	5	94
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden[1]	24	71	5	3	59	38	2	25	73	1	12	86
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m
United States	0	45	55	0	40	60	1	37	62	2	31	67
Other economies												
Flemish Comm. (Belgium)	1	99	1	1	96	3	4	86	10	2	24	74
French Comm. (Belgium)	0	98	2	1	92	7	1	79	20	1	10	90
England (UK)	x(4)	x(5)	x(6)	1[d]	42[d]	57[d]	x(10)	x(11)	x(12)	1[d]	21[d]	78[d]
Scotland (UK)	m	m	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	3	39	58	1	32	67	2	34	64	1	23	76
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	x(5)	12[d]	88[d]	x(5)	x(5)	x(6)	a	a	100
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

Table X2.11. Distribution of school heads aged 25-64, by educational attainment and level of education (2024)

Percentage of school heads

	Pre-primary			Primary			Lower secondary, general programmes			Upper secondary, general programmes		
	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent	Short-cycle tertiary or below	Bachelor's or equivalent	Master's or doctoral or equivalent
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	m	m	m	m	m	m	m	m	m	m	m	m
Canada	m	m	m	m	m	m	m	m	m	m	m	m
Chile[1]	0	100[d]	x(2)	0	100[d]	x(5)	0	100[d]	x(8)	0	100[d]	x(11)
Colombia	m	m	m	m	m	m	m	m	m	m	m	m
Costa Rica	m	m	m	m	m	m	m	m	m	m	m	m
Czechia[1]	53	27	20	2	2	96	2	2	96	2	2	97
Denmark	m	m	m	m	m	m	m	m	m	0	0	100
Estonia	0	22	78	0	8	92	0	7	93	0	2	98
Finland	15	61	24	0	1	99	0	1	99	0	0	100
France[1]	x(4)	x(5)	x(6)	9[d]	58[d]	33[d]	m	m	m	m	m	m
Germany	m	m	m	m	m	m	m	m	m	m	m	m
Greece	x(4)	x(5)	x(6)	0[d]	57[d]	43[d]	x(10)	x(11)	x(12)	0[d]	23[d]	77[d]
Hungary	1	93	6	0[d]	68[d]	32[d]	x(4)	x(5)	x(6)	0	44	56
Iceland	19	45	36	3	48	49	3	48	49	8	31	61
Ireland	m	m	m	m	m	m	m	m	m	m	m	m
Israel	a	a	a	0	3	97	0	1	99	2	18	80
Italy	a	a	a	a	a	100[d]	a	a	x(6)	a	a	x(6)
Japan	m	m	m	m	m	m	m	m	m	m	m	m
Korea	1	6	92	0	11	89	0	10	90	0	9	91
Latvia	x(10)	x(11)	x(12)	x(10)	x(11)	x(12)	x(10)	x(11)	x(12)	0[d]	19[d]	81[d]
Lithuania	m	m	m	m	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m
Mexico	m	m	m	m	m	m	m	m	m	m	m	m
Netherlands	x(4)	x(5)	x(6)	0[d]	63[d]	37[d]	x(10)	x(11)	x(12)	0[d]	49[d]	51[d]
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m
Norway	4	94	2	2[d]	85[d]	13[d]	x(4)	x(5)	x(6)	2	47	51
Poland	0	1	99	0[d]	0[d]	100[d]	x(4)	x(5)	x(6)	0	0	100
Portugal	a	5[d]	95[d]	x(1)	x(2)	x(3)	x(1)	x(2)	x(3)	x(1)	x(2)	x(3)
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia[1]	0	47	53	0[d]	0[d]	100[d]	x(4)	x(5)	x(6)	0	3	97
Spain	m	m	m	m	m	m	m	m	m	m	m	m
Sweden[1]	33	56	11	9[d]	45[d]	46[d]	x(4)	x(5)	x(6)	9	22	69
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m
United States	0	2	98	0	2	98	0	2	98	0	2	98
Other economies												
Flemish Comm. (Belgium)	1	94	6	1	94	6	0	61	39	1	10	90
French Comm. (Belgium)	0	100	0	0	100	0	0	100	0	0	100	0
England (UK)	x(4)	x(5)	x(6)	0[d]	48[d]	51[d]	x(10)	x(11)	x(12)	0[d]	15[d]	85[d]
Scotland (UK)	m	m	m	m	m	m	m	m	m	m	m	m
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	0	12	88	0[d]	6[d]	94[d]	x(4)	x(5)	x(6)	x(4)	x(5)	x(6)
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	m	m	m	m	m	m	m	m	m	m	m	m
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	m	m	m	m	m	m	m	m	m	m	m
Romania	m	m	m	m	m	m	m	m	m	m	m	m
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m

Note: For notes on this table and a link to download the data, see Notes for Tables section above.

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Education at a Glance 2025

OECD Indicators

Education at a Glance is the authoritative source of information on the state of education worldwide. It offers comprehensive data on the structure, financing, and performance of education systems across OECD countries and partner economies. This publication features more than 100 charts and tables that present key insights into the output of educational institutions, the impact of learning across countries, access and participation in education, financial investment in education, and the roles of teachers and school organisation.

The 2025 edition places a special focus on tertiary education, examining attainment rates, variations in labour market outcomes by field of study, completion rates, and the skills of adults with tertiary qualifications. An additional chapter provides results from the Survey of Adult Skills 2023 (PIAAC) and links them to other indicators in the publication.

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